RECOMMENDATIONS FOR MAKING ANTI-POACHING PROGRAMS MORE EFFECTIVE IN THE SOUTHERN AFRICAN REGION THROUGH THE ANALYSIS OF KEY VARIABLES IMPACTING UPON THE POACHING OF ELEPHANTS IN BOTSWANA

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by

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The escalation of poaching in Botswana forced the leadership to deploy its military in addressing this problem. The use of the military in the fight of poaching experienced multiple challenges both at operational and tactical level. The military was deployed in this campaign as a quasi-political decision, thought to be a quick remedy to the poaching dilemma in Botswana. The quasi-political aspect has omitted creation of a national strategy that could comprehensively address the poaching dillema in Botswana and the southern African region, especially that most of the poachers originated from outside the country. Although on one hand it could be argued that the BDF is positively addressing the poaching problem, on the other, it could also be argued that the lack of a clear policy on anti-poaching has hampered the mission. The inefficiency of these campaigns is demonstrated by continued poaching activities in Botswana.

This experience has resulted in the realization that Botswana needs to rethink and redefine its national strategy on anti-poaching in order to increase the effectiveness of the intervention means and ways. The national instruments of power need to be comprehensively integrated, synchronized, and harmonized with a view to provide unity of effort in the operational environment to achieve the end state. Once developed, Botswana then needs to work with its neighbors (Zambia and Zimbabwe) in order to ensure that its strategy is effective.

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

RECOMMENDATIONS FOR MAKING ANTI-POACHING PROGRAMS MORE EFFECTIVE IN THE SOUTHERN AFRICAN REGION THROUGH THE ANALYSIS OF KEY VARIABLES IMPACTING UPON THE POACHING OF ELEPHANTS IN BOTSWANA., by Major Jackson J. Sekgwama, 108 pages.

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ACRONYMS

AO	Area of Operation
BDF	Botswana Defence Force
CARL	Combined Arms Research Library
CC	Critical Capabilities
CGSC	Command General and Staff College
COG	Center of Gravity
CR	Critical Requirements
CV	Critical Vulnerabilities
DCSC	Defence Command and Staff College
GOB	Government of Botswana
GWF	Garrison Workshop Francistown
GWSSKB	Garrison Workshop Sir Seretse Khama Barracks
IGO	Intergovernmental
IO	Information operations
LOE	Lines of Efforts
MDJS	Ministry of Defence, Justice and Security
MOE	Measures of Effectiveness
MOP	Measures of Performance
MWT	Ministry of Wildlife and Tourism
NCO	Non-Commissioned Officer
NGO	Nongovernmental
PPADB	Public Procurement and Asset Disposal Board

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CHAPTER 1

INTRODUCTION

Southern Africa is home to some of the world's finest flora and fauna. Botswana is part of this region, and has a good number of wild animals. These beautiful wild animals attract a lot of interest within the global tourists' sphere. In turn, the tourism industry contributes positively to Botswana's Gross Domestic Product (GDP), which stands at 4.5 percent (Moreri-Toteng, 2007). Along with tourism, the elephant tusk and rhinoceros horn attracts the wrath of poachers. Botswana's initial strategy on wildlife conservation employed the Department of Wildlife. This department struggled in its attempts to counter the activities and actions of armed poachers, who would recklessly shoot and kill any force opposing their poaching activities. In order to thwart poaching, Botswana Defence Force (BDF) deployed in aid to civil authority. However, the military to meet with various challenges as indicated by continued poaching activities in Botswana (Molomo 2001).

The purpose of this study is to investigate strategies for Botswana to improve its anti-poaching strategy in order to effectively reduce poaching of elephants in Botswana. Zambia and Zimbabwe anti-poaching case studies were used to explore how they are addressing the challenge of elephant poaching. This research explores how the current Botswana anti-poaching campaigns address the illegal hunting and killing of elephants.

The main issues associated with the challenges of poaching in Botswana are; lack of comprehensive anti-poaching strategy, the vastness of the operational area, and the number of troops deployed for these campaigns. The type of equipment used in the wildlife areas, terrain and weather, exclusion of the local populace in the anti-poaching

campaigns, special training expertise, organized and armed poachers, economic gains acquired from poaching, corruption, lenient penalties and political instability in the neighboring states also play a key role. Despite the current regulations and laws on wildlife conservation, Botswana continues to attract poachers. This paper shall primarily focus on recommending how Botswana can improve its anti-poaching strategy and reducing poaching by analyzing two case studies.

Botswana boasts a wide range of fauna that includes, elephants, rhinoceroses, zebras, and lions just to mention a few. In the past, these animals roamed the wilderness freely without any hindrance, but current developments such as modern technology, as well as, increased human populations and activities creates competition for space. This confinement increases poaching as an organized criminal activity as a result of animals' restrained movements. The most targeted animals are rhinoceroses and elephants for their horns and tusks respectively. It is against this background that this paper seeks to investigate the main causes of elephant poaching.

Botswana's historical, political, and geographical background

In 1885 chiefs Khama III, Bathoen I, and Sebele I traveled to England in order to plead for protection. The purpose of this journey was to plead a case against the British government's handing over the Bechuanaland Protectorate (Botswana) to Cecil John Rhodes, whom the chiefs did not trust. In 1966, the Republic of Botswana gained its independence from Great Britain and elected its first president, Sir Seretse Khama. National elections are held every five (5) years. President Khama remained as Botswana's president until 1980, when he passed away. His deputy president, Sir Q.K.J. Masire, succeeded him. Botswana has had four democratically elected presidents since

independence. After independence due to instability in southern Africa there was many challenges national leaders had with which to deal, among them was the establishment of a defense force.

An Act of Parliament formed the Botswana Defense Force (BDF) in April 1977. It is purely a homegrown army in that it did not inherit its origins from the British Government. At its formation, the BDF did not have a lot of military hardware like her counterparts in the African region. Work force and skill shortages were the initial concerns. A nucleus unit from the Police Mobile Unit (PMU) formed the foundation upon which the BDF was established. This unit consisted of dedicated officers and soldiers who were ready to serve the nation despite the hostile conditions prevalent in the region. Major General Mompati Sebogodi Merafhe was the commander of this young defense force. His deputy was Brigadier Seretse Khama Ian Khama who is now the current president of the Republic of Botswana. These leaders faced the mammoth task of building a dependable and effective defense force with very little resources. In addition, the region was still in a state of unrest because of the numerous political conflicts occurring in many of the nations bordering Botswana (Mandaza 1985).

Botswana is a land-locked country, sandwiched between Zambia, Zimbabwe, South Africa and Namibia (figure 1). The liberation warfare between the white minority regime of Ian Smith and the guerillas in Southern Rhodesia (now Zimbabwe) negatively affected northeastern Botswana. Nearby in Angola, the Popular Movement for the Liberation of Angola (MPLA) waged a fierce liberation battle against the country's Portuguese colonial regime. Botswana's closest and largest neighbor in the south was in turmoil. The South African apartheid regime brought regional peace and stability to a

complete halt. This turmoil undermined all the regional peace efforts and hence the establishment of BDF in order to protect the nation from frequent incursions and attacks from neighboring states.

Figure 1. Map of Southern Africa showing Botswana and her neighbors

Source: Oasis Africa, "Various Maps of Southern Africa," http://www.oasisafrica.com/Maps.html (accessed 15 December 2011).

The formation of the BDF was clearly a response to the waning regional security situation in the 1970s. Moreover, the discovery of diamonds earlier in the decade, profoundly changed Botswana's opportunities. Botswana eventually became one of the world's top producers of gem diamonds. The Government of Botswana (GOB) proved very judicious in the managing of its newly discovered natural resources. By the late 1970s, the newly established diamond wealth provided the GOB with the resources to establish an effective defense force within 11 years after independence. Ecotourism also

increased due to the abundance of flora and fauna. All these new developments required the national strategies review and reorganization because of the ever-changing strategic, operational, and tactical environments.

Overview of BDF and its deployment in anti-poaching

The BDF's performance in thwarting all the neighboring adversaries' attacks was remarkable as demonstrated by Botswana's peace and stability. However, it has come at a high price, the BDF suffered heavy losses and casualties in the process of bringing peace and stability. In 1978, just a year after its formation, the young defense force lost 15 members in the Lesoma ambush. This was a South Rhodesian army ambush. In the process, several other innocent men, women and children lost their lives in Botswana due to these attacks by the South Rhodesian army (Henk 2007).

After independence of the southern African states, the region became generally peaceful, but frequent poaching activities in northern Botswana shortened the peace. In this region poachers use military weapons such as AK-47s and Fabrique Nationale (FN) assault rifles. These armed gangs were not only depleting the animal herds, but were also threatening the growing tourism industry (Henk 2005). Dan Henk, the author of *Botswana Defence Force and the War against Poaching in Southern Africa*, emphasized the point that these gangs were using assault rifles (Henk 2005). The Department of Wildlife attempted to deter poachers but was unsuccessful. An act of Parliament then deployed the BDF in an active anti-poaching role. In 1987, the BDF began to protecting wildlife (Henk 2007).

As indicated earlier, the BDF, at its inception, had very limited amounts of military equipment. Vehicles, weapons and personnel were scarce at best. In 1977, the

BDF was comprised of only two companies: A Company, based in Francistown, and B Company, based in Gaborone. Increased recruitment and military training both locally and abroad steadily resourced these companies over the years. Today the BDF consists of approximately a division plus. The GOB charges the BDF with multiple assignments to include defense of the territorial borders (defense of Botswana's sovereignty), aid to civil authority, national disaster relief, anti-poaching campaigns, and external peace and stability operations (BDF Newsletter 2012).

Types of poachers and poaching activity in Botswana

There are three types of poachers: subsistence, trophy, and commercial. Subsistence poachers are those who normally poach game for consumption. The practice is commonly referred to as "killing for the pot." These poachers do not usually pose a serious threat to the extinction of the wildlife. However, the relationship between subsistence and the other two makes them a formidable force in the anti-poaching campaign. Trophy poachers are not a serious threat in the region. They usually kill animals for sport trophies. It is the commercial poachers who pose a serious challenge in wildlife conservation efforts since they indiscriminately kill animals for illicit business purposes such as illegal rhinoceros horn and ivory trade. They are organized and closely interconnected with the subsistence poachers (Henk 2007).

Illegal rhinoceros horn and ivory trade triggered a change of guard from Wildlife Department to the defense force. Hence, Baldus' assertion that a stronger force is required to counteract these gangs than the Department of Wildlife can provide, and although wildlife protection is not a role generally assigned to the military, it plays a large role in Botswana's economy (Baldus 2004, 16). The Department of Wildlife and

National Parks lost elephants and rhinoceroses in tens and hundreds per day during the era of their protection (Conniff 2011). The resolution of the nation's leadership led to the BDF's current dual roles: protecting Botswana's national sovereignty and its anti-poaching campaigns. This was a result of a rapid synchronized decision making process of the strategic ends, means, as a reaction to the poaching scourge that was threatening the existence of Botswana's wildlife.

There are more than 164 different species of animals (mammals) in Botswana. Among these species, there are more than 120,000 elephants, which directly translate into 240,000 tusks. The average tusk weight for 60-year-old elephants is 135 pounds (61 kilograms [kg]) for males and 20 pounds (9.2 kg) for females. Tusks usually cost an average of 450 US Dollars (USD) per kilogram. Conniff shows that 20 tons of ivory were smuggled out of Africa into Asian countries in 2011 by poachers, this smuggling almost doubled the quantity seized in the past years (Conniff 2011, 2).

This large level of commercial poaching worries anti-poaching experts trying to protect the African elephant from extinction. However, the rising demand for ivory has driven the price from $200 per kilogram in 2005 to more than $700 per kilogram in 2011. It is easy to see there is a huge amount of money to be made in smuggling. It is a serious market and many people are currently venturing into it (Nielsen 2007). These economic facts clearly demonstrate why these gangs are determined to risk their lives to continue poaching.

Despite the value of elephant tusks, there is a more valued horn, the rhinoceros horn. Human appetite for distinctive horns nearly brought to the edge of extinction five of the world's assorted classes of rhinoceros. Rhinoceros horns have been valued for many

centuries because of their attractive gleaming color after carving, and their alleged healing possessions. In a Vietnamese market, a “freshly cut” rhinoceros horn sells at a price of USD $25,000–$40,000 per kg (Nielsen 2007).

The rhinoceros of Botswana were almost extinct, particularly the black rhinoceros. The Khama Rhinoceros Sanctuary (KRS) was especially built for these endangered animals near Paje. There are many wildlife animals in the KRS, some of which are: rhinoceroses, giraffes, antelopes, duikers, gemsbok and various types of birds. Currently there are 34 white rhinoceroses and 2 black rhinoceroses in the KRS and they have all-round clock protection (Tjibae 2010). In 1989, residents of Serowe set out to create a wildlife reserve near Serowe. The setting chosen was Serwe Pan, a former cattle post in a traditional hunting area rich in wildlife. This effort is mainly to preserve the few remaining rhinoceroses the poachers continued to hunt despite the concerted efforts of anti-poaching campaigns by the BDF. Lack of a national strategy that clearly defines the BDF’s role/responsibilities in anti-poaching campaigns escalates the BDF’s challenges.

Overview of geographic and relief conditions of Botswana

The northern swampy area, known as the Okavango Delta, is the largest inland delta in the world, and it attracts all sort of wild animals as it provides both water and food. In return, it provides for a large share of Botswana’s tourism income. The “waters extend the delta’s usual area from 5,000 square kilometers (2,000 thousand square miles) to anywhere from 6,000 to 12,000 square kilometers (2,300 to 4,600 square miles) during rainy seasons” (Allen 2009).

This magnificent place not only attracts tourists, but many other people visit this area for wrong reasons (poaching). It is for this reason that the Okavango Delta has

become a hotspot for poaching activities. The swampy area poses a serious challenge for ground transport accessibility. Many factors lead to its inaccessibility such as few developed roads, muddy and swampy terrain, thick vegetation, and series of creeks and rivers. Deep sands characterize some other parts of this region.

Northern Botswana experiences annual heavy rainfalls and as such, it is thickly vegetated and perennially wet. This terrain offers adversaries with adequate cover and concealment and hampers friendly forces movement and maneuver. The terrain not only requires special materiel and/or equipment, but it requires highly trained personnel to operate in it. These challenges require a strategic paradigm shift in the national leadership's overall approach in anti-poaching interventions.

Hills, rocky outcrops, mountains, low plains, creeks and rivers characterize Northeastern Botswana. During rainy seasons, the plains are usually muddy. The creeks and rivers constantly flow at high velocities making it difficult to either conduct mobile or foot patrols. Botswana's northeastern boundary marks a long border with Zimbabwe, which currently is embattled in economic, social, and political instabilities. This border is generally porous as such cross border crimes are constantly committed with very little apprehension from law enforcement.

Transnational relationships

Transnational relationship often exasperated the situation of illegal poaching. Ethnic groups overlap with the majority of people living along either side of the border and relate to each other. Two thousand Zimbabweans are deported every month from neighboring countries with Botswana recording the highest number of Zimbabweans being deported (more than 500). The illegal immigrants access Botswana through its

northeastern border. This area has the bulk of wild animals, especially elephants. The illegal immigrants have always been viewed skeptically as regards to escalating poaching incidents and general criminal activities such as cattle, donkey, goat and sheep rustling, rape, and burglary (Chaunza 2011).

Problem Statement

The apartheid regime of South Africa, and liberation wars waged in Rhodesia (now Zimbabwe), Mozambique, Angola and South West Africa (now Namibia) prompted the formation of the BDF. The main goal of the BDF at its formation, eleven years after independence, was to protect Botswana from the troubles engulfing the southern Africa at that time. With limited resources and work force, this young and homegrown defense force effectively preserved peace and serenity in Botswana, but the additional responsibility of wildlife protection has strained the effectiveness of both efforts.

Concurrently, there is no national policy addressing the utilization of the Okavango wetlands, which is currently one of the hotspots of poaching. The Botswana Gazette newspaper recently published the Botswana Minister of Environment, Wildlife and Tourism, Kitso Mokaila's concerns to ensure sustainable management of the wetlands because of their good tourism (Botswana Press Agency 2011). The involvement of the local populace in the anti-poaching campaign can greatly improve the situation. If poaching is controlled, the situation will revert to normal; with an effective wildlife management strategy, the wildlife conservation efforts can be realized.

This paper endeavors to propose recommendations for making anti-poaching programs more effective in the Southern African region through analysis of key variables influencing poaching of elephants in Botswana.

Primary Question

How can Botswana improve its anti-poaching strategy: A case study premised on elephant poaching in the southern African region.

Secondary Research Questions

1. What are the major causes and impacts of poaching (social, economic, developmental, security, etc.)?
2. What are Botswana's ends, ways, and means needed for anti-poaching strategies to succeed?

Assumptions

The assumption is that the Department of Wildlife will continue to issue hunting permits without any wildlife conservation training. The current tendency is that once the permit to hunt is issued, it is assumed the hunter shall be ethical in his or her hunting expedition. However, numerous reports have revealed otherwise, hunters exceed their hunting authorized limits. It is assumed that the current policy on wildlife conservation (Chapter 38:01, Wildlife conservation and national parks, subsections 67-70, Ivory and Rhinoceros horn) remains unchanged for the entire research period, since it is not effectively preventing organized poaching (Laws of Botswana 1992, 20).

The assumption is that armed gangs of poachers pose a serious threat to national security and if left unattended they could undermine Botswana's sovereignty.

The current poaching trends in Botswana are alarming. If there is no action to counteract the trend, it will eventually lead to extinction of some of the endangered species such as the rhinoceros and the elephant. Botswana's cultural heritage will be

negatively impacted because the future generations will find diminished species diversity. The wildlife and tourism industry will be damaged, and Botswana' economic stability will be adversely affected.

Definitions of terms

Anti-poaching: The act and campaigns directed at preventing the illegal hunting and killing of wild animals.

Campaign: refers to series of operations that the BDF conducts in the fight against poaching.

CITES: The Convention on International Trade in Endangered Species of Wild Fauna and Flora is an international covenant between governments. Its aim is to safeguard that international trade in wild animals and plants does not threaten their survival in their natural habitats.

Fight: Measures put in place in order to overcome poaching activities.

Gangs: Armed and well-organized poaching teams determined to conduct poaching operations despite all other counter-measures.

Information operations: These operations are used to win the hearts and minds of the general populace without necessarily using any lethal force.

Light assault weapons: Weapons that fire up to 7.62 mm rounds and are operated by a single person.

Lines of Efforts: Link multiple tasks with goal-oriented objectives that focus efforts towards establishing end state conditions (Department of the Army 2010).

Measures of Effectiveness: "A criterion used to assess changes in system behavior, capability, or operational environment that is tied to measuring the attainment

of an end state, achievement of an objective, or creation of an effect" (Department of the Army 2010, 5).

Measure of Performance: "A criterion used to assess friendly actions. These are typically assigned as tasks to subordinates or coodinating instructions if they apply to the force as a whole" (Department of the Army 2010, 6).

Ministry of Defence, Justice and Security: Agency of the Government of Botswana responsible for both internal and external security, maintenance of law and order, and protection of human life and property.

Ministry of Wildlife and Tourism: Agency of the Government of Botswana responsible for wildlife, environment and tourism.

Poaching: In this context shall refer to illegal hunting and killing of wildlife conflicting to local and international preservation and wildlife conservation laws. In this context, it generally refers to the violation of hunting laws pertaining to elephants.

Public Procurement and Asset Disposal Board: Charged with the procurement and disposal of public assets.

Reduce: To undermine poaching activities to a point where it no longer threatens the continual existence of national wildlife.

Region: Region in this paper is used to refer to the eastern and southern Africa.

Swamps: Refers to the marshy Okavango Delta and the surrounding areas.

Wildlife: In this context, it refers to wild animals, for example: elephants, Rhinoceroses and others.

Limitations

This research was conducted within the confines of the US Command General Staff College (USCGSC) Intermediate Level Education (ILE) at Fort Leavenworth. This generally implies this research took place within 12 months of ILE main course. In all research projects, time has always been a major challenge, and this research is no exception.

This research concentrated solely upon the analysis of the elephant poaching in Botswana and two anti-poaching campaigns in Zambia and Zimbabwe. The other challenge was limited information. Although the Combined Arms Research Library (CARL) has a wealth of documents and books, some historical documents were not available, even through inter-library loan. Therefore, this research was limited to the use of CARL, electronic media, related journals, and newspapers articles about poaching. Most significantly, there is currently neither a national policy nor national strategy addressing the BDF's engagement in anti-poaching campaigns. Funds for this research were limited to the researcher's stipend for making international confirmatory calls regarding the current trend of poaching.

The author has been involved in the anti-poaching campaigns at various levels (operational, tactical, and combat service support). He was personally involved in tactical anti-poaching operations; involved in the operational planning for the procurement of the BDF equipment; and operated as a duty field officer in the BDF's Operations Center, where all reports pertaining to the BDF operational area are documented and executed. While these assertions could bias the conclusions and recommendations by the researcher, great efforts have been taken to approach the problem objectively.

Scope and Delimitations

The study will assess feasibility and suitability of the solution of the challenges only on the anti-poaching challenges Botswana faces in its wildlife conservation, particularly the elephant species. It will examine the effectiveness of the current policies and programs (ways) as well as the employment of its instruments national power in anti-poaching campaigns. The study used two case studies to determine whether there are omissions and capability gaps in the current Botswana's anti-poaching campaign plan. The anti-poaching case studies that were used are Zambia and Zimbabwe.

This study assesses the root causes of poaching in the above two named countries and compares them with those affecting Botswana. This study does not seek to trace the origins of the poachers and their possible markets, though a little reference was drawn regarding the possible markets. The study seeks to constructively critique the current wildlife (elephants) strategy with a view to recommending a more comprehensive strategy.

Significance of Study

The condition of the wildlife preservation today can only be determined when one considers where we have been and where we are going. The inevitability of the world changes have made human beings realize that to be eventually successful in any endeavor we must transform our capabilities. The challenges of wildlife conservation strategy of yesteryears will not be applicable today unless humans become more expeditious, operations and campaigns against poaching become more joint, more comprehensive and adaptive, as well as enhance Botswana's capability to be successful across the entire range of anti-poaching campaigns.

The results of this research shall be useful to Botswana in numerous ways. Once the challenges facing Botswana's current anti-poaching campaigns are identified, the poaching phenomenon can be more effectively dealt with. It will assist Botswana employment of its instruments of national power that is diplomacy, information operations, military, and economy (DIME) in anti-poaching mission. Because of this, poaching incidents shall be greatly reduced, thereby preserving the Botswana's flora and fauna. It is hoped that improvements in Botswana at strategic, operational, and tactical levels will reduce poaching in Botswana and perhaps the Southern African Development Community (SADC) region.

The results of this research will expose Botswana's capability gaps, thereby providing a direction towards effective anti-poaching campaigns. Socio-economic, corruption, ineffective anti-poaching policies, and political instability may be assumed the leading causes of poaching. The current exclusion of the local populace in anti-poaching activities, and lack of informational operations will be analyzed to see how they can be synchronized and harmonized with a view of unifying the effort against poachers. This may in turn reduce the efforts of poachers to enlist support of the local populace.

The other good likely to emerge from this research is wildlife management improvement. This will result in the general increase of animal species, including the endangered ones. The tourism industry, which is currently the second largest economic contributor (after diamonds) to the GDP of Botswana (4.5 percent), will be enhanced and hopefully create employment opportunities. Botswana's Tourism Policy of 1990 describes tourism as a new "engine of growth" and Botswana's ultimate goal is to

diversify the country's economy through promotion of tourism. Wildlife conservation will also provide a treasure for the future generations (BOPA 1991).

As a BDF Officer, I have a particular interest in anti-poaching operations in Botswana. I strongly believe that mitigating the challenges currently facing the BDF is the key to an effective campaign against poaching. Moreover, this research provides me with the opportunity to sharpen my research skills and ability to devise viable options when faced with challenges. Because of the MMAS process, I will be better equipped to assist in the BDF's future efforts in these areas of research, wildlife conservation, and other related assignments.

Summary

In summary, the BDF has been involved in anti-poaching campaigns as a quasi-political decision, thought to be a quick remedy to the poaching dilemma in Botswana. The quasi-political aspect has omitted creation of a national strategy that could enhance the effectiveness of the instruments of national power in their anti-poaching campaigns. Although on one hand it could be argued that Botswana is positively addressing the poaching problem, on the other it could also be argued that the lack of an effective policy on anti-poaching has hampered the mission. The inefficiency of these campaigns is demonstrated by continued poaching activities in Botswana.

First, it was prudent to find out major causes of poaching in Botswana. Lastly, a number of case studies should have been conducted, although this does not necessarily mean that they could have brought a positive impact to Botswana, but at least they could have provided an insight regarding how other countries are addressing the poaching challenges. Botswana's laws concerning wildlife conservation experienced minimal

changes since their inception despite huge changes experienced in wildlife management. Chapter 2 endeavors to show how corruption, socio-economic, political instability, and wildlife conservation laws in their anti-poaching campaigns affect each of the selected countries. These investigations may reveal how Botswana should evolve its wildlife conservation policies, lest it finds itself dealing with irrelevant situations and challenges.

CHAPTER 2

LITERATURE REVIEW

Introduction

The purpose of this research is to analyze key variables influencing the poaching of elephants in Botswana aimed toward developing a more effective anti-poaching in the Southern African region.

> International wildlife crime is [escalating] in this climate of [worldwide] trade. [Conservationists] contend that the most effective way to contain this illegal trade is to determine where the wildlife is being removed. This, [they argue], allows authorities to direct law enforcement to poaching hot spots, potentially stops trade before the wildlife is actually killed. It prevents countries from denying their poaching problems, and thwarts trade before it enters into an increasingly complex web of international criminal activity. (Wasser 2008, 1)

Wildlife poaching, more especially the destruction of elephants and rhinoceroses has troubled Botswana since the early 1980s, as mentioned in Chapter 1, various strategies have been adopted to address this challenge. It will be assumed that the challenges facing Botswana in its fight against poaching can be categorized into three broad groups: social, economic, and political.

This chapter reviews much of the literature and relevant information pertaining to the primary questions. A paper by Craig Spencer and John Slabbert entitled *Using the Popular Press to Quantify the Impact of Poaching activities on African Elephants in Sub-Sahara Africa* (2010) forms the primary source of data reviewed in this chapter. Information pertaining to causes of poaching was identified and reviewed from academic journals from CARL's subscriber service to Ebscohost on Zambia and Zimbabwe anti-poaching case studies. A research paper by D.L. Kgathi and B.N. Ngwenya entitled "Community *Based Natural Resource Management and Social Sustainability in*

Ngamiland: Implication for Natural Resource Management" was extensible reviewed as shown below to identify key variables in Botswana's anti-poaching campaigns (Kgathi and Ngwenya 2002). Botswana's wildlife Conservation and National Parks Act of 1992 also provided valuable data pertaining to wildlife conservation campaigns in Botswana (Botswana, Wildlife Conservation and National Parks Act 1992). This data was reviewed to identify pertinent information on anti-poaching programs, causes, and remedies. Once the review is completed, trends and patterns will be identified and analyzed in Chapter 4 to formulate recommendations for development of a more effective anti-poaching campaign for Botswana.

Literature Review parameters

The following secondary research questions were the premises upon which the literature review was conducted:

1. What are the major causes and impacts of poaching (social, economic, developmental, security, etc.)?
2. What are Botswana's ends, ways, and means needed for anti-poaching strategies to succeed?

Major causes of poaching

Introduction

Much has been written about wildlife extinction and preservation around the world, and although briefly, Botswana poaching issues have been included. A lot of journals, websites, magazines and books, and other media sources have discussed strategies for protecting wild animals, most especially the endangered species. Botswana

has taken valuable strides in trying to curb poaching and one of these steps is the deployment of its military power (BDF) in anti-poaching campaigns. However, it is important to note that this endeavor did not yield positive results as shown below by the number of continued elephants being poached in Botswana.

Various causes of poaching vary from one region to the other and from one continent to the other. This paper shall focus on major causes of the elephant poaching with particular reference to the Zambia and Zimbabwe case studies since the two countries share numerous similarities with Botswana, other than the international borders. It is clear some of the main causes of poaching are weapon proliferation in Africa, corruption, socio-economic challenges, lack of firm policies on poaching, and political instability. Anti-poaching campaign case studies in Zambia and Zimbabwe have been used to either qualify or disqualify the above-perceived causes. Spencer and Slabbert indicate that the formula for high poaching incidents and high numbers of the local population involved in poaching could be represented as follows:

P% = {Ed + I (A)}/ (SE + PH);
Where:

1. P% = Potential for locals to become involved in poaching.
2. Ed = Elephant density.
3. I = Infrastructure (such as transport routes and communications networks).
4. A = accessibility of the elephant inhabited areas (dense forests, isolated locations, etc.).
5. SE = Social and economic state of the country.
6. PH = Political history. (Spencer and Slabbert 2010, 4)

This can be shown in a country rich with elephants such as Botswana, especially in national parks and game reserves, relatively good infrastructure, and accessible elephant habitat areas enhances the application of the above formula. This would normally be of benefit to the conservation efforts of this species, as it would provide for

easy regulation and monitoring, surveillance, and compliance. However, this is undermined by socio-economic challenges because of economic recessions and other competing social demands such as health, education, and communication (Spencer and Slabbert 2010). Let us now review literature about the two case studies on anti-poaching.

Zimbabwe Anti-poaching campaign

Zimbabwe enjoyed relative peace and stability after its civil war from 1969 – 1979 until the mid-to-late 1990s, when political turmoil associated with socio-economic challenges became rampant. This situation led to numerous challenges in Zimbabwe, amongst them elephant poaching. The parks department of Zimbabwe has shown dedication to sustainable utilization as a means of conserving the country's wildlife heritage. Sustainable usage can be defined as "utilization of natural resources without endangering the unrelenting survival of those species" (Duffy 1999, 101). Legislative provisions in Zimbabwe offer the outline for national regulation of use of resources. Duffy states that sustainable utilization "ensures economic and development benefits from wildlife. The policy philosophy is that wildlife cannot survive in a developing economy unless it is economically self-supporting. In Zimbabwe, wildlife use has become another form of land use that competes with agriculture and cattle. This general situation is culturally accepted in Zimbabwe" (Duffy 1999, 98).

The parks department of Zimbabwe took some time before it realized that poaching of elephants was taking place. In 1991, it was reported that 260 elephants had been killed illegally since 1984. Duffy shows that these figures were too general and did not reflect a true picture of what was practically happening to elephants. Revelations are that in 1992, out of 3000 elephants, only 240 – 350 remained. The intensity of poaching

in [Zimbabwe] remained "underestimated for a long time while the parks department remained over-optimistic about the effects of poaching on elephant populations despite reports of illegal hunting activity." Such underestimation meant that Zimbabwean parks department and the Government of Zimbabwe could claim to be defeating poaching operations (Duffy 1999). The developing theme here is that the legal custodians of wildlife were ignorant and ineffective in their wildlife conservation efforts. Duffy's general observation is that a series of dynamics added to the rise of commercial poaching between 1980 and 1990 (Duffy 1999, 102).

The usual perception is that poaching is a state challenge to be undertaken by its agencies. However, the origins of poaching within a particular nation-state are associated not only to social, economic, and political processes in neighboring states, but also to international factors. One of the major causes of poaching in Zimbabwe, on regional level, was the "economic and political instability in Zambia" up through the mid-1990s. The leader of anti-poaching operations, Glen Tatham, stated that before the economic and political implosion in Zimbabwe in the early and mid-2000s, "…the economic situation in Zambia was the root cause of the increase in poaching in the Zambezi Valley. The townships of Lusaka became fertile recruiting grounds for poachers." The substantial economic deterioration in the 1980s and economic structural modification program pursued by the Zambian government led to rise of socio-economic challenges within the general populace. The economic gains from poaching became attractive for those who were undesirably affected by the economic adjustment, hence poaching of elephants for ivory in Zimbabwe (Miliken et al. 1993).

According to Gibson in his book entitled "*Politicians and Poachers – the Political Economy of Wildlife Policy in Africa*," poaching in Zimbabwe by Zambians was a result of the collapsing powers of former president Kenneth Kaunda's one party state. This type of administration (one-party) wielded a lot of power, and as such, policies, including wildlife conservation, sailed through parliament without much scrutiny (Gibson 1999).

On international level, well-versed "observers see the increase in the supply of weapons and the African continent as having an impact on rates and patterns of poaching." The rise was a result of "civil wars, liberation wars, and superpower competition in the 1970s and 1980s in Southern Africa" (Duffy 1999, 110). Poachers' efficiency to kill a good number of elephants in one hunting increased because of expansion in the supply of automatic weapons. Zimbabwe's Minister of Defense acknowledged in 1990 that poaching was no longer an ordinary expedition, but it was some kind of military operation (Hove 1990). Therefore, it could be argued that weapons proliferation in Africa escalated the challenges of anti-poaching campaigns.

Duffy's paper further points out that increased poaching activities demanded the formulation of firmer anti-poaching strategies. This assertion leads us to explore strategy further. What is strategy? In this context, strategy is the identification and synchronization of the ends, ways, and means utilizing the instruments of national power to serve state interests (Diplomacy, Information, Military, and Economic), commonly referred to as DIME (Yarger 2008). Although Zimbabwe showed resolve in its war against rhinoceros poaching, it did not do the same with elephant poaching. Duffy points out that the "state had neither the will, [nor] internal legitimacy nor capacity to manage

elephants in the southeastern low veld. The [Zimbabwe] parks department proved unable to control illegal [ivory dealings] because [the culprits] were more powerful state [actors] from within and outside Zimbabwe, notably South Africa" (Duffy 1999, 97).

The changing patterns of "poacher incursions challenged the [perception] of poachers as outsiders. [Poachers] operated further into Zimbabwe" to an extent they encroached into protected wildlife areas such as Hwange, Chizarira, and Chete national parks. To achieve these deep operations, they had to seek assistance from the Zimbabwean nationals (Duffy 1999).

On the other hand, complex relationships between national, regional, and international players, as depicted by clusters showing interest in Africa, Europe, and Asia, escalated commercial poaching. The profitable vocation in ivory merged the three groups' interests that Tatham regarded as responsible for the increase of poaching in Africa: political figures, businesspersons, and diplomats (Duffy 1999, 108). Increased proliferation of automatic weapons came during post decolonization, when new missions opened all over Africa. These relationships were a clear indication of corruption and malpractices of justice. An internal report by Professor Marshal Murphree on poaching in Gonarezhou National Park that involved officials was never publicized. The report further reveals that this could be for either fear of personal safety or due to the government involvement (Murphree 2003).

Tatham further points out that most of the diplomatic missions were Asian embassies. These later acted as transfer points for ivory and rhinoceros horn to Asian consuming states. One interviewee stated that South Africa was the biggest exit port for

illegal ivory packed in diplomatic bags because they were not subjected to searching and/or opening (Duffy 1999).

Zimbabwe introduced Communal Areas Management Program for Indigenous Resources (CAMPFIRE) as a means to offer benefits of wildlife to "producer communities" these are communities that share territory with wildlife. Although the CAMPFIRE looks determined in addressing poaching, Spencer and Slabbert research shows that a minister was implicated with a poaching ring in Zimbabwe (The Zimbabwean 2009). Their study further shows that socio-economic and political instability in Zimbabwe turned locals into poaching in order to get income and resources. From January 2009 to October 2009, approximately 10 months, poachers allegedly killed 65 elephants.

Law enforcement mechanisms play a key role in curbing poaching. Table one below shows a summary of countries where significant poaching cases were reported and corresponding success rates of their enforcement agencies (Spencer and Slabbert 2010). A developing trend shows that the more ineffectual the laws the more the poaching incidents.

Table 1 shows effect of law enforcement on some few African countries, with particular attention on Zambia and Zimbabwe. The numbers of poaching incidents indicated on it are those reported during the initial study period and are not a catalog of all poaching incidents reported during this time. Percentage of enforcement success shows the success rate of the law enforcement agents each time a poaching incident is reported. For example, in DRC four poaching incidents were reported during the period of this study and none of these were successfully arrested, Zambia had two reported

incidents of poaching and only one was successfully addressed, and Zimbabwe had eight reported poaching incidents and only 50 percent (four) were successfully apprehended (Spencer and Slabbert 2010).

Table 1. African countries displaying effect of law enforcement

Countries with major poaching Incidents	**Number of Poaching Incidents**	**% enforcement success**
DRC	4	0
Cameroon	4	50
Zambia	**2**	**50**
RSA	2	100
Zimbabwe	**8**	**50**

Source: Created by author using data from Craig Spencer and John Slabbert, Trans frontier Africa–SAVANNA Project, 2010. Spencer and Slabbert used this data during the month of May 2010 for their research.

Review of table 1 shows that law enforcement mechanisms and effectiveness are proportional to the number of poaching incidents. This revelation shows how effective law enforcement can positively affect wildlife conservation efforts. It is also evident from Duffy's research that involvement by Zimbabwean officials in poaching escalated the problem of ineffective law enforcement. The parks staff and Zimbabwe National Army also got involved in poaching and smuggling. Anti-poaching campaigns are rendered

ineffective if the people who are responsible for wildlife preservation (Duffy 1999) assist the poachers.

Unrestricted movements of elephants across the region make them susceptible to poachers. Elephants without Borders (EWB) research has revealed that the habitat of elephants in northern Botswana is large (24,828 Km^2) documented for African elephants and for the first time, have categorically established that these elephants are part of large adjoining elephant inhabitants including western Zimbabwe, the Caprivi Strip in Namibia, southeast Angola and southwest Zambia. “These research findings have complimented and contributed to outlining the area surrounding the largest wilderness area, the Kavango-Zambezi Trans frontier Conservation Area (KAZA TFCA)” (Chase 2009, 5). These movements make it very difficult to monitor the numbers of elephants, thereby making it very difficult for the conservationists to detect any poaching activities.

Figure 2. Map of Southern Africa showing Trans frontier elephant populations

Source: IRAS, Information System for Rare Species Management, "Elephant: Transboundary Range," http://www.nnf.org.na/RARESPECIES/ InfoSys/elephant/distribution/La_Distribution_Africa.htm (accessed 29 May 2012).

Zambian case study on anti-poaching

Introduction

The aim of ivory trade ban was to reduce elephant poaching, but it has not worked. A key question would be: Is it possible to save the elephant and still have a dynamic trade in ivory? This question has troubled scientists and conservationists for a long time, and the argument is as hot as ever. Almost 5 years ago, southern African countries were allowed to sell 50 tons of stockpiled ivory to Japan to fund conservation efforts. Elephant trade bans differ in many southern African countries as well as Africa as a whole, and some countries disputed against it since the mid-1980s to date (Stiles 2004).

The common belief is that their administrations exercise thorough nature conservation strategies and, as a result, their general elephant inhabitants have grown to unmanageable sizes. The contention is that they should not be punished because of mismanagement of wildlife by other countries. Furthermore, they require the earnings from the sale of elephant tusks and other elephant by-products to fund safeguarding efforts. The Convention on International Trade in Endangered Species (CITES) Conference of Parties in 1997, elected to permit Botswana, Namibia and Zimbabwe to sell 50 tons of state ivory accumulations to Japanese traders on a special investigational basis, which ocurred in 1999 (Stiles 2004).

Zambian Anti-poaching campaigns

Allowance of ivory trade brought about both the good and the bad. Stockpiles of ivory were sold and the funds were used in conservation efforts, but at the same time, it opened a floodgate of illegal ivory trade. Loopholes such as this one were supposed to have been anticipated and addressed in order to avoid illicit ivory trade. Even though this brought about a boost on the means it also jeopardized the overall mission of wildlife protection, since the continuation of illegal hunting persist today. This is mainly because the poachers always find a way to go around the Elephant Trade Information System (ETIS) and sell their loot. The ETIS's main purpose is to assign a serial number to the ivory for shipment. The serial number is then recorded on the exporting permit and assists in the global tracking of the ivory. The main reason for ETIS is to curb the illicit ivory trade (Milliken et al. 2009).

Despite concerted efforts by all these programs, Zambian inflation forced a considerable number of its nationals into poaching, especially rhinoceroses and elephants

for their valuable horns and tusks respectively. Michael Kremer and Charles Morcom argue, “Many open-access resources such as elephants are used to produce storable goods.” They further contend, “Anticipated future scarcity of these resources will increase current prices and poaching.” They observe that the economical way for administrations to eradicate disappearance of wild animals may be through use of heavy anti-poaching penalties. For administrations that lack trustworthiness, the economical way to contain wiping out of natural resources may be to collect stockpiles of durable goods such as ivory for future sales should the elephant populations fall (Kremer and Morcom 2000).

The rise in elephant and rhinoceros poaching in Zambia are mostly connected with the changes of the worldwide economy than any particular cause inside the country. The decrease of international copper values in the mid-1970s, copper being Zambia's chief foreign exchange producer, compelled many Zambians to find alternative springs of revenue. Many of them commenced illegal hunting and killing of rhinoceroses (especially black rhinoceroses) and elephants for their horns and tusks respectively, which were sold on the local and global markets (Elephant and rhinoceros poaching in Zambia). As Gibson (1995) points out, with reference to Zambia, cuts in jobs and services in the rural areas after the copper crash made trivial trade in game meat, and coalitions with ivory and rhinoceros horn poachers, even more important to a household's income (Gibson 1995).

In 1992, Zambia initiated an anti-poaching ingenuity that resulted in the capture of over 1,500 poachers and the repossession of approximately 1,200 weapons used in rhinoceroses and elephants poaching. Despite reduction of poaching in Zambia, a report

released in early 1994 concluded that notwithstanding these apprehensions, poaching is on the upsurge in Zambia (Gibson 1995). Others have argued that it is "corrupt government officials, often themselves involved in illegal poaching activity that undermine the effectiveness of anti-poaching laws" (Bridgland 1994, 1). According to Gibson's observation, members of the Zambian military and police units also suffered from income declines, as result, possessed weapons and authority to support poaching (Gibson 1995).

This phenomenon presents indications and traces of corruption. Although corruption is subtle, collapse of law and order, and good governance usually results in people engaging in corrupt practices. Transparency International's definition of corruption consents that only public office bearers practice corruption. Nevertheless, either "instigating or agreeing to corrupt deals equally involves members of the public or the private sector, who act dishonestly by offering bribes or seeking an equitable distribution of public services to their personal advantage" (Dickson, Hutton, and Adams 2009, 297).

> A 1995 report by the Zambia Wildlife Conservation Society found well-documented incidents of army personnel setting up roadblocks at game park entrances. Army vehicles, laden with meat and tusks, would be seen driving away later. Even if not directly poaching, soldiers and police regularly allowed other Zambians to rent, purchase, or borrow official weapons and ammunition. (Gibson 1995)

Summary of Zambia and Zimbabwe Case Studies

The following key variables clearly stood out during the review of both Zambian and Zimbabwean anti-poaching case studies. These included crosscutting ineffective law enforcement agencies due to the involvement of other powerful government authorities such as senior government officials, military, and police officers. Rampant corruption of

those involved in the wildlife preservation, including senior authorities, lead to ineffective anti-poaching and wildlife conservation policies and programs.

The socio-economic challenges both in Zambia and in Zimbabwe forced many nationals into poaching as a means to survival. Post-colonial weapon proliferation in the Southern African region worsened poaching, since many animals could be easily killed in one hunting expedition using an automatic assault rifle, as opposed to either the traditional bow and arrow, or older weapon versions. The fixed penalties vis-a-vis varied penalties encouraged poachers to take a risk knowing that penalties on poaching are fixed despite the number of animals killed. The stability of the region and peace enjoyed by the people determines their freedom of actions including ethical behavior in their daily lives. This is clearly demonstrated by the Zimbabwe case study, particularly in the late 1980s and early 1990s.

Case study of anti-poaching in Botswana

Introduction

Poaching in Botswana has been a national concern for quite some time as shown in various studies that have been conducted and previous records on poaching. Dan Henk, in his book, *Botswana Defence Force and the War against Poaching in Southern Africa (2005)* indicates that when the BDF was first involved in anti-poaching campaigns in 1987, armed gangs from neighboring countries were nearing the extinction of the rhinoceroses and indiscriminately killing the elephants (Henk 2005). The main reason these specific animals are targeted is value of the ivory.

Although Henk acknowledges that the BDF deals adequately with poaching campaigns, he also points out that BDF is faced with some challenges. He states that

"despite Africa's problems, the continent offers many examples of humankind's most commendable achievements. This is [because of] the successful struggle by a small but well-disciplined and well-led African army (BDF) to protect a vital national resource, a role performed with dedication and consistent success since 1987." However, this low-intensity encounter poses substantial political, operational, tactical, and technical challenges (Henk 2005). It is understood that illegal border crossings and poaching of endangered species are politically sensitive issues, but this research shall focus holistically on analysis of Botswana's current policies and programs in order to identify flaws that render the overall strategy ineffective.

Current strategy in Botswana dealing with anti-poaching

Government policies on wildlife and tourism are embodied in key policy documents and appropriate legislation such as the National Conservation Strategy of 1990, the Tourism Policy of 1990, the Tourism Act of 1992, the Wildlife Conservation Policy of 1986, the Wildlife Conservation and National Parks Act of 1992, and the Botswana Tourism Development Program completed in May 2000. Vision 2016 is the Botswana's development benchmark that will mark 50 years of independence. In addition to these regulatory mechanisms, both wildlife and tourism development will be directed by the decrees in Vision 2016, and the Performance Management Strategies (PMS) of the two sectors (Chebanna 2007).

More explicitly, in order to help sustain wildlife populations and raise the numbers of those species considered endangered, the Ministry of Environment, Wildlife, and Tourism (MEWT) will undertake the following actions during National Development Plan 9 (NDP 9):

1. Revision of the overall Wildlife Conservation Policy of 1986;
2. Development and implementation of animal specific management strategies and policies, including those for rhinoceroses, elephants, crocodiles and predators;
3. Development and implementation of a Game Ranching Policy to help guide and boost this industry which could function as a conservation tool; and
4. Appraise the endangered/threatened wildlife species list in Botswana by closer observation, with a view to developing a policy on this issue (Modisa n.d.).

Table 2 illustrates the ends, ways, and means of Botswana's National Conservation Strategy (NCS) of 1990, Wildlife Conservation and National Parks Act of 1992, and Botswana Tourism Development Program of 2000. It plays a significant role in analyzing the impact of strategy on anti-poaching campaigns.

Table 2. Ends, Ways, and Means of different legislatives on wildlife conservation in Botswana

Botswana Tourism Development Program		
Ends	**Ways**	**Means**
1. Generate employment 2. Raise incomes in rural areas 3. Promote rural development. 4. Encourage local communities to appreciate the value of wildlife and its conservation.	1. Tourism Act (1992) and Tourism regulations (1996) 2. Botswana National Ecotourism 3. Botswana Tourism Master Plan	1. Funds from National budget 2. Contributions from Private Sector 3. NGOs/IGOs funding
Wildlife Conservation and National Parks Act of 1992		
1. Protection of wildlife 2. Govern the sustainable use of wildlife 3. Establishment of Wild life Management Areas and Controlled Hunting Areas (WMAs)	1. Declaration of WMAs in a Government Gazettes 2. Regulations for WMAs	1. Funds from National Budget 2. Contributions from Private Sector 3. NGOs/IGOs funding

National Conservation Strategy		
1. Provide National Policy on wildlife conservation 2. Sustainable development	1. Involving local population 2. Education 3. Provide the incentives	1. Funds from National Budget 2. Contributions from Private Sector 3. NGOs/IGOs funding

Source: Created by author with data from Botswana's National Conservation Strategy (NCS) of 1990, Wildlife Conservation and National Parks Act of 1992, and Botswana Tourism Development Program of 2000, http://www.saiea.com/dbsa_book/Botswana.pdf (accessed 12 May 2012).

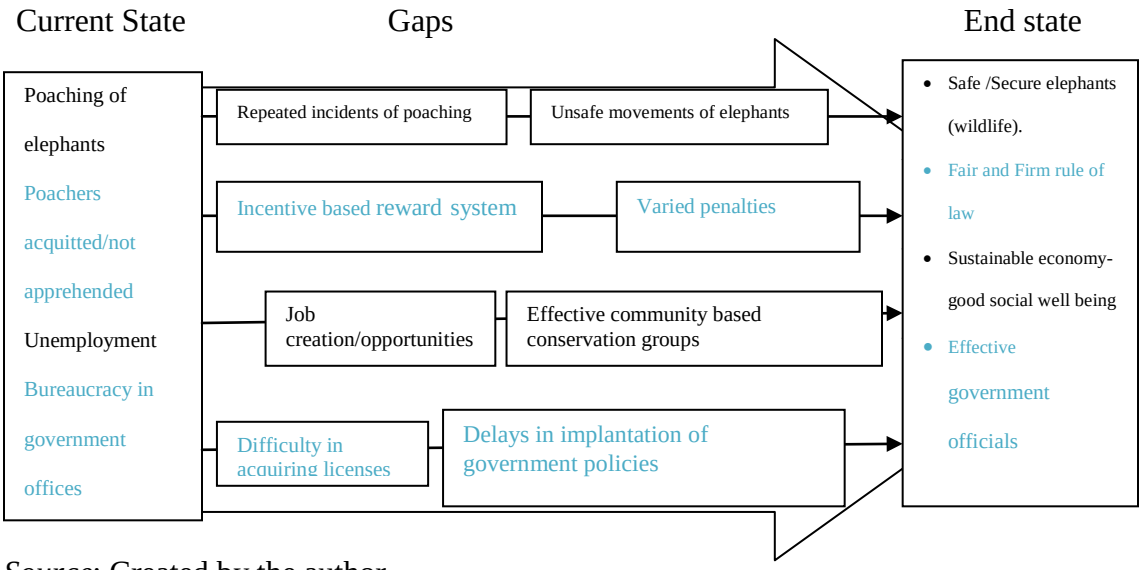
Table 3. Potentially Applicable Sectorial requirements

Sector	Primary Agency	Title and date of document	Purpose
Conservation and Forestry	Ministry of Wildlife and Tourism Ministry of Agriculture	• Forest Act of 1981 • Wildlife Conservation & National Park Act (1992-2002). • Wildlife Conservation and Game Reserves of 2001 • CBNRM Policy	• To provide for conservation of forestry reserves • Provide for wildlife management and conservation
Tourism	Ministry of Wildlife and Tourism	• Tourism Act of 1992 • Tourism Regulations of 1996 • Botswana Tourism Act of 2004 • National Ecotourism Act	Provides for the development of tourism in Botswana

Source: Created by author using data from *Handbook on Environmental Assessment Legislation in the SADC Region*, http://www.saiea.com/dbsa_book/Botswana.pdf (accessed 12 May 2012).

Table 3 is particularly presented to demonstrate the depth of purpose in different sectors as shown above. The ways (policies and programs) are clearly documented; however, their purposes remain ambiguous. Table 4 seeks to identify lines of efforts (LOEs), which the end state thereof should provide a base for the purpose of different policies and programs on wildlife management and conservation.

Table 4. Lines of Efforts on anti-poaching campaign through whole of Government approach



Source: Created by the author.

Although all the above LOEs are geared toward improving policies and strategies concerning wildlife conservation in Botswana, the existing wildlife protection strategies are not adequately reducing the levels of poaching. Henk purports that Botswana involved its defense force into anti-poaching campaigns in the late 1980s in order to strategize and mobilize against poaching. Initial efforts by the Wildlife Department were

not effective, and poaching activities were rising despite its concerted efforts to stop them. There were a number of reasons that contributed to their failure, some of which are: work force (strength), reliable equipment, training, intelligence, surveillance, reconnaissance, cooperation and communication with the general population (Henk 2005).

Reports are that some long haulage trucks that transit through Botswana into other countries in the region engage in illegal trafficking of both the rhinoceros horns and elephant tusks. Unconfirmed reports state that these trucks stop in the general areas where there are ample elephants and rhinoceroses under false pretenses of breakdowns. These trucks are coordinated with the poachers and they collect the loot under the cover of darkness and head "innocently" to their destinations. This observation brings us to the question of whether Botswana law enforcements agencies are doing their job well or not. This shall be answered in the analysis of data in Chapter four under law and order. There might be need for the placement of the national security forces at strategic points along the mentioned routes.

Botswana's ends, ways, and means needed for anti-poaching strategies to succeed

Numerous means and ways have been in place in the SADC region with a view of preserving the wildlife, especially the endangered species. Since 1984, the Zimbabwean rangers have been involved in capturing and relocating rhinoceroses from unsafe areas to relatively safe areas.

In Botswana, the ways that are currently in place to curb poaching include the employment of the BDF, Wildlife Department, controlled hunting, programs, and the

formation of community based wildlife conservation trusts. The means include, among others, adequate funding of these departments. In every strategy formulation, establishing the correct objectives (ends) is critical. Objectives provide a road map that has to be pursued in order to solve a problem. Identification and achievement of the suitable goals in the framework of the anticipated policy, national interests and the situation brings about the desired strategic effect. “If the wrong objectives are identified, the concepts (ways) and resources (means) serve no strategic purpose” (Department of the Army, CGSC AY 11-12).

A renowned author, Wallace Stegner, once said that establishment of national parks (conservation reserves for wildlife) was the best thing that ever occurred to America (Stegner 1960). President John F. Kennedy also remarked that “setting aside an ample portion of natural resources as national parks [allow] future generations to know the majesty of the Earth as we know it today”. Former USA National Park director, Bill Mott, remarked that the future of national parks depends on the public’s understanding of their value. These individuals’ remarks demonstrate that protected areas provide a wide range of economic, social, and ecological values, such as maintenance of cultural traits and ecological needs, education, conservation of species and inherited diversity, protection of specific cultural and natural topographies, scientific research, ecological use of resources, tourism and recreation, and wilderness security (Albright et al. 1987).

Wildlife Conservation Policy

The Botswana National Assembly approved its Wildlife Conservation Policy in July 1986. Its primary objective is to boost the growth of a commercial wildlife business that is sustainable and durable. This policy’s main focal point at inception was to create

economic opportunities, jobs and incomes for the rural population in particular and the national economy in general (GOB 1986, 1).

Specific objectives include the following:

> 1. To [realize] the full potential of the wildlife resource
> 2. To develop a commercial wildlife industry in order to create economic opportunities, jobs and incomes for the rural population and to enable more rural dwellers to enter the modern wage economy.
> 3. To increase the supply of meat because of further development of wildlife commercial [utilization]. The increased supply of meat can be directed to commercial use or subsistence. (Jones 1999)

Three main beliefs premise the policy: wildlife should positively add to community improvement, populaces should aggressively take part in wildlife utilization and conservation, and that administration should offer the required regulation of the wildlife business. The policy further "[embedded] the system of Wildlife Management Areas (WMAs) which had been established under the Tribal Grazing Land Policy (TGLP) of 1975. The [TGLP] made [provisions] areas of communal land to be [preserved] as reserves for alternative land uses including wildlife [utilization]." WMAs are approved before District Councils and District Land Boards can officially declare them in the Government Gazette. Once put in the gazette, regulations and a management plan should be established for each WMA and a policy of sustained wildlife use suitable for each area should be instigated (Jones 1999).

The focus of Community Based Natural Resources Management (CBNRM) undertakings on community improvement and enablement is a critical reflection in evaluation of accomplishment of these missions from a preservation standpoint. Ultimately, conservationists will criticize them from the extent to which wild habitats and biodiversity have been preserved or enriched. Prior to achieving these results, rural

communities “need to be empowered to manage their resources and need to be able to reap the benefits of sustainable management. Particularly in the early stages, CBNRM projects must therefore be judged on the extent to which empowerment and the development of successful common property resource management institutions are achieved” (Jones 1999, 2).

However, as pointed out in Jones’ research paper, the CBNRM in Botswana is faced with challenges such as unification and harmonization of effort in issuance of wildlife rearing permits and leases on land use. The whole process is long and tedious, and based on this a considerable number of people stay away from it, associating it the few elites. Some unconfirmed reports allege that this disjointedness of award of permits, in some cases, results in corrupt practices by government officials. One of the accepted prerequisites for effective CBNRM is an empowering plan and statutory structure that provides societies safe rights over natural resources. It also empowers them to make judgments concerning conservation of the natural supply, and permits them to keep income resulting from its usage (Brown and Wyckoff-Baird 1992).

The current President of Botswana emphasized wildlife conservation and management in his inauguration speech in 2008. The president said “But we also face new challenges such as environmental protection, and changing social values, brought about by rapid urbanization” (Khama 2008). Amongst other important assignments, the president is an active member of wildlife societies (e.g., he is the patron of the Kalahari Wildlife Conservation Society and patron of the Khama Rhinoceros Sanctuary). Botswana has signed a protocol for the Wildlife Conservation and Law Enforcement, which was agreed upon by all Southern African Development Community (SADC)

member states. Although active involvement of senior government officials is important in anti-poaching campaigns, a lot has to be done in regard to formulation of a more comprehensive strategy on wildlife conservation.

Henk states that when the BDF was first involved in anti-poaching campaigns in 1987, armed gangs from neighboring countries were nearing the extinction of the rhinoceroses and indiscriminately killing the elephants. He contends that Botswana was trying to preserve its natural resources by employing the BDF. However, the main question that needs to be explored is whether the continued use of the BDF, without a review of the capability gaps through measures of effectiveness (MOE) and measures of performance (MOP), was appropriate. "We have the knowledge that conservation works if executed in a timely manner, yet, without [a coherent strategy], strong political will, in combination with targeted efforts and resources, the [natural resources] and the services it provides can be lost forever (Jones 1999). It can be correctly argued that the idea of using the BDF in anti-poaching campaigns was a quasi-political decision as opposed to a coherent strategy resulting from a deliberate decision making process that may not have been adequately analyzed before putting it into effect.

The strategy's ways and means must be clearly defined and effectively synchronized in order to achieve the strategic ends. Resources (means) in strategy construction define the forms and stages of means that are required to sustain the theories of strategy (Department of the Army, CGSC AY 11-12). These resources can be either tangible or intangible. They include among others: training, human resources, specialized equipment, facilities, finances, and other such things. In Botswana, tangible resources are always insufficient to achieve the best result. Shortages come from either an inability to

procure the required operational equipment or the desire of leadership to practice safe, efficient and prudent means of expending government funds as well as competing demands from different national needs.

Resources needed to affect the policies, programs, and commitments (ways) are an essential part of a good strategy. In addition, while competence can be gained holistically by doing things better, resources (means) are often the centerpiece of efficiency. Inadequate allocation of resources for a strategic policy is a recipe for disaster and may cause even greater costs in the end (Department of the Army, CGSC AY 11-12). Botswana must address poaching challenges concurrently with other national challenges such as HIV/AIDS, drought, poverty, illiteracy and many others, while these competing needs overstretch the limited national budget. Jones points out that "although Botswana has a relatively strong economy; it has one of the biggest gaps between the rich and the poor in the world." At the last review in 2003, 30.6 percent of Botswana's population was predicted to live below poverty line, compared to 15 years earlier (Mguni 2011). Most of these people live in villages and heavily rely on renewable natural resources (including wild animals) on their livelihoods (Jones 1999). This condition is likely to drive some of the rural folks into poaching for their socio-economic needs and even basic subsistence.

Even though much emphasis and effort have been made regarding conservation of wildlife in Botswana, a lot remains to be done to address the current poaching dilemma. There are many ambiguous issues concerning how the anti-poaching campaign should be addressed. The literature review shows a general audit requirement of human resources, equipment, and all current systems in place concerning the effectiveness of BDF in its anti-poaching role in order to address all the gaps in its campaigns.

The author observes that the employment of the BDF for anti-poaching intervention is probably appropriate, but attainment of the national ends (objectives) can only be achieved through the creation of a comprehensive strategy that effectively integrates the ways, and means.

Role of regional cooperation on Botswana anti-poaching campaigns

Wildlife is a potential natural resource of the SADC region. SADC countries, less the Democratic Republic of Congo (DRC), Madagascar, and Mauritius, have 39 percent of their total surface area as protected areas and a large population of wildlife, especially elephants accounting for 39 percent of all African elephants. SADC has espoused the Protocol on Wildlife Conservation and Law Enforcement as the primary framework for regional collaboration and amalgamation in wildlife conservation. The Protocol clearly recognized two factors that will oversee the regional collaboration and amalgamation in wildlife conservation. Establishment of mutual methodologies to the conservation and sustainable utilization of wildlife resources is key to realization of wildlife preservation. Law and enforcement is also paramount in wildlife preservation, the effective enforcement of laws governing the use of resources helps a great deal in their conservation (Dzingirai 2003).

On the technical issues, Articles 6 to 11 are the fundamental parts of this Protocol, which outlines the details of how the Protocol is to be executed. It identifies what issues are to be covered and to what extent, and the central points for the expansion of programs and missions. This protocol commenced on the 30 November 2003 subsequent to its endorsement by at least two thirds of the Member States. Tourism is primarily based on wildlife resources in SADC region and it meaningfully contributes to insufficiency

reduction. However, in most villages of the SADC region, game meat consumption remains the main and old-style basis of animal protein. Wildlife in its broader meaning, that is, flora and fauna, this offers a significant and assorted variety of edible and moneymaking goods indispensable to rural source of revenue. Amongst these are wild fruits, mushrooms, honey, fish, and building materials (BOPA 1991).

The SADC methodology is to preserve the wildlife resources in a unified manner that unswervingly profit the preservation and the communities by supplying edible products and revenues from profitable consumptive and non-consumptive products. This includes the managing of wildlife as wild inhabitants in large ecosystems as conventional protected areas, such as game reserves and national parks. These also include "Community Wildlife Management Areas (CWMA) [such] as the Campfire in Zimbabwe and other [newcomers] in the SADC region. Farming wild [animals] in game farms or intensive management, as domesticated species in game ranches, are other management options [encouraged] by SADC Member States" (BOPA 1991, 3).

However, the major challenge is to develop policies, legislation and institutional structures that recognize wildlife as a viable land-use option, and allow community based management and benefits from wildlife resources. Member states' militaries and anti-poaching forces do not have clear operational strategies that guide and inform them on how to conduct these campaigns. As already indicated, the purpose of a strategy is to provide a clear guideline concerning how the end state is to be achieved especially in a fluid operational environment of the 21st century. It shall be analyzed and revealed how the lack of strategy affects the general anti-poaching campaigns.

The GOB is not ignorant of the possible infiltration of poachers into Botswana from neighboring countries. The Botswana Gazette quoted President Khama of Botswana during the handover of four rhinoceroses to the Orapa Game Park saying: “Recently, we have learnt with alarm of the senseless and tragic destruction of rhinoceroses by poachers in South Africa, where last year alone more than 400 rhinoceroses were killed by poachers, and poaching still continues to date.” This newspaper continues to quote the Botswana president in the same forum saying: “We are also aware that these poachers are now eyeing Botswana rhinoceroses as their next target. It has come to our attention that some have dispatched a covert expedition into Botswana to locate rhinoceroses for poaching operations” (Mosarwe 2012). This worrisome situation requires all means and ways to be put in place in order to curb this reckless killing of wildlife.

The table 5 provides a summary of poached elephants in Botswana for the past five years. It provides some data to ponder on during analysis and recommendations. Although these numbers are relatively low, the reader should reckon that Botswana target is zero poaching incidents because continued poaching regardless of how low, affects eco-tourism and the wildlife.

Table 5. Summary of elephants killed in Botswana for the past 5 years

No. of Elephants killed in Botswana from 2005 to 2009		
Year	**No. of Elephants Killed**	**Herd Size**
2005	10	150,000
2006	13	152,184
2007	18	151,289
2008	10	152,346
2009	22	153,258

Source: Created by author with data from Botswana's Department of Ministry Management, www.mewt.gov.bw/DMM/news_events.php?id=73 (accessed 10 May 2012).

Decentralization of Management of Wilderness Resources

The United Nations Conference on Environment and Development (UNCED) that was held in Rio de Janeiro from 3-14 June 1992 concentrated on the state of the global environment and the association between economics, science, and the environment in a political context. The conclusions of the conference at this Earth Summit resulted with 105 nations' leaders pledging a commitment to sustainable development. Since Rio, the Botswana Government has advocated an organized method to restructure the management of natural resources (BOPA 1991).

Undertakings such as community projects, photographic and hunting safaris in Wildlife Management Areas (WMAs), and game ranches on privately owned land were engaged with a view to reinforcing the Rio declaration. Although these activities pre-existed the Rio Declaration, they were not clearly calculated, planned, and controlled to promote conservation and biodiversity. "Managers are now charged with monitoring the resource stock [in their areas] and, in return, they can benefit from either consumptive or

non-consumptive use of wildlife or the wilderness resource. Draft regulations exist for WMAs and for Game Ranching and Farming" (BOPA 1991, 2).

It is important to note that, largely, there is no contradiction between conservation and development. "Firstly, rural communities have always used natural resources, including wildlife, to contribute to secure livelihoods and have had a number of mechanisms to regulate [the] use of resources. Most rural African communities do not separate use from conservation" (BOPA1991).

> Secondly, many of the undertakings in CBNRM programs which appear to be concerned with rural development issues, are in fact concentrated on building local level community management institutions which can, on behalf of local people, manage natural resources sustainably. At the heart of most CBNRM activities in Botswana and Namibia is an attempt to help communities develop institutions that can manage common property resources successfully. (BOPA 1991)

It can be argued that these community-based projects were introduced late, after poachers have plundered the local wildlife and the relationship between the local communities and the BDF remains contentious.

Sun Tzu argues that any prolonged war cannot be easily maintained and sustenance of it is very difficult (Sun Tzu 1963). The morale of the troops is bound to deteriorate over time, and as it does so, it is bound to cause serious relationship problems between the troops and the civilian population. These relationships often impede ethical challenges such as apprehension of suspected friends and relatives, and involvement in poaching itself.

Summary

The above data above shows a sharp increase in the poaching activity in Botswana from 2005 with a slight drop (from 18 killed elephants in 2007 to 10 in 2008),

however 2009 saw the figures doubling to 22 elephants. Some critiques argue that these are not alarming figures with the large elephants herds in Botswana. The point here is not about the number of herds, but illegal hunting and killing of elephants that Botswana is endeavoring to address. These high figures signal a concern to all wildlife conservationists (more especially within the SADC region), and call for stringent measures to be taken in addressing the poaching dilemma.

This review shows that Botswana needs to develop a comprehensive strategy that will effectively address corruption, socio-economic issues, non-involvement of ordinary citizens in CBNRM programs, and law enforcement complacency. The SADC region must devise more collaborative and inclusive measures to curb poaching. Use of the militaries and other forces without a clear strategy will not achieve the desired end state, that is, the overall goal of wildlife protection will not be achieved.

The literature reviewed showed that a number of individuals, organizations, departments, and ministries are involved in corrupt practices that lead to elephant poaching and ivory trafficking. Political instability is also a major contributor and challenge to wildlife conservation and management. Socio-economic variable cuts across the three nations under examination. Most people revert to poaching for social and economic reasons, and the reviewed literature shows that a considerable number of people in Zimbabwe engage in elephant poaching primarily for meat and of course its ivory.

Prosecution of offenders across all the three countries is non-deterministic and sentences are relatively light for the severity of the offences committed. Wildlife authorities across the three countries do not wield much authority, have meager

resources, and marginal political encouragement from their administrations to execute their duties. Furthermore, the implication of custodians of wildlife, and high-ranking officials, as shown in Zambia and Zimbabwe, and of course in Botswana, undermines the efforts of wildlife conservation. Recently President Khama, of Botswana called for the elimination of unnecessary bureaucracy in the operations of government. His observation is that unwarranted red tape only served to detract and inconvenience people (BOPA 2012). Bureaucracy is toxic, and if left unchecked particularly at strategic level, results in corruption, poor governance, ineffective laws, crime and other social ills. These variables are analyzed in chapter 4, as outlined in chapter 3; the focus is premised on corruption, socio-economic, governance, and law and order.

CHAPTER 3

METHODOLOGY

Introduction

Chapter 3 presents the research design methodology used during the conduct of this study. The research heavily depended upon data collected from various sources, for example: books on poaching phenomena, various websites, enquiry letters and emails to BDF officers concerned with poaching and telephone interviews. Collected data was then analyzed using the qualitative methodology with particular reference to selected case studies involving anti-poaching efforts in Zambia and Zimbabwe. The study lends itself towards a qualitative methodology because this methodology recognizes the significance of premising the research within a particular social, cultural, and historical context (Trochim 2006). The qualitative research method was used with case studies in order to solve both the primary and secondary research questions.

Methodology

Chapter 1 was an introductory chapter that introduced the southern African region, Botswana (before and after independence), the nation's leadership, the BDF, its formation, command structure at formation, and its lack of skilled work force and resources. Regional instability and different wars that were fought in the process were addressed, as well as BDF's involvement in the regional struggle for peace and democracy. It described how the BDF became involved in anti-poaching campaigns in the late 1980s; it also introduced the fauna and flora found in Botswana and described how the poachers benefit from killing these animals. Chapter 1 also introduces the types

of poachers, provided a brief introduction of their motives and an overview of their interconnectedness.

Chapter 2 was a literature review. This chapter reviewed much of the literature and relevant information pertaining to the phenomena of elephant poaching in Botswana, Zambia, and Zimbabwe. Various books, magazines, journals, newsletters, news magazines and information from numerous websites were consulted and reviewed. These sources were visited with a view towards finding pertinent information about the poaching phenomena, the economic and developmental impacts of poaching, and anti-poaching programs with the intent of identifying key factors or variables that could be analyzed. Once the analysis was completed, trends or actions were identified around which recommendations will be made in Chapter 5 to affect a more effective anti-poaching strategy for Botswana.

Elephant poaching, along with other big game such as rhinoceroses, is a problem throughout much of Africa. The case studies of Zambia and Zimbabwe were chosen to be studied, along with Botswana, due to the transnational nature of wild animal poaching (refer to figure 2). Additionally, all these nations were analyzed in a study already completed by Craig Spencer and John Slabbert entitled *Using the Popular Press to Quantify the Impact of Poaching Activities on African Elephants in Sub-Sahara Africa* (2010). Further readings were done on a journal entitled: *A model of incentives for the illegal exploitation of black rhinoceroses and elephants: poaching pays in Luangwa Valley, Zambia* (1993) by E.J. Miller-Gulland and N. Leader-William. Bob Burn; and *Elephants* (2000) by Michael Kremer and Charles Morcom discovered valuable data on elephant poaching in a journal; *combating the Illegal Trade in African Elephant Ivory*

with DNA Forensics (2008) by Samuel K. Wasser et.al. Thus, the data is reliable and readily available. Elephants were selected as the one species to focus on regarding anti-poaching efforts since the data was readily available and it, along with rhinoceroses, is the animal most people readily identify with when discussing the phenomena of big game poaching.

The following secondary research questions were restated to form the premises upon which the primary question was answered:

1. What are the major causes and impacts of poaching (social, economic, developmental, security, etc.)?

2. What are Botswana's ends, ways, and means needed for anti-poaching strategies to succeed?

Each one of the secondary questions has been explored to reveal schools of thought and/or themes developing from other authors' reviews of similar topics.

Chapter 3 provides an outline of how this research was conducted and its data analyzed. It also provides insight as to how sources in the preceding chapter were used to develop variables for analyzing challenges that the BDF must address in order to accomplish the goals of Botswana's national anti-poaching strategy. It introduces the methodology or road map that was followed in the compilation of this research. Moreover, it outlines the design method that was used during the gathering, reviewing, analyzing and conclusion of the research. This thesis seeks to identify and analyze answers to the secondary questions (as outlined in chapter 1) that will enable the

answering of the thesis' primary question, through methodical research. Analysis was done using the qualitative method with the aid of case studies.

Explanation of the Qualitative Methodology

Qualitative and quantitative researches are the two main methodologies used to research social sciences.

> An in-depth understanding of human behavior and the reasons that govern human behavior [are analyzed through] qualitative research. [Contrary to] quantitative research, qualitative research depends on reasons behind various [characteristics] of behavior. Simply put, it [explores] the why, and how of decision-making, as compared to what, where, and when [used in] quantitative research. Hence, the need is for smaller, but focused samples, rather than large random samples by which qualitative research categorizes data into patterns as the primary basis for organizing and reporting results. (Trochim 2006, 5)

Data for qualitative research emanates from many media and these include text, sound, still and moving images, as opposed to quantitative research, which relies completely on the analysis of numerical or quantifiable data (Trochim 2006). There are certain advantages to using the qualitative research method. Chief among these are the method's ability to produce more in-depth and comprehensive information because:

1. It uses subjective information and participant observation to describe the context, or natural setting, of the variables under consideration, as well as the interactions of the different variables in the context.

2. It seeks a wide understanding of the entire situation by enabling the researcher to analyze data from macro to micro level without risking analytical integrity, that is, by avoiding the proverbial comparison of oranges to apples (Trochim 2006).

The strong point of qualitative research is its capability to deliver multifaceted word-based explanations of how people understand a specific study topic. Quite often,

the research issue is based on the contradictory beliefs, behaviors, emotions, opinions and relationships of individuals. In applying the qualitative methodology for this particular study, the researcher identified the relevant research material, focused the analysis and categorized information by identifying patterns or trends. These patterns or trends were further interpreted in order to attach meaning and significance to the analysis (Trochim 2006).

Methods of Data collection

The researcher obtained reference material such as journals, magazines, books, and electronics in order to get first-hand information regarding elephant poaching in Botswana, Zambia, and Zimbabwe. The Chapter 3 research methodologies are organized into four parts:

Part I: Describes how data was collected.

Part II: Credibility of sources used in the research.

Part III: Recognizes the conflict drivers for investigation and defines how the data was investigated.

Part IV: Summary and conclusions.

Part I: How was data collected?

The data for this research was collected from academic journals from the Combined Arms Research Library's subscriber service to Ebscohost, magazines, print documents, and electronic materials. These materials provided a deep insight about the research topic and provided sufficient information for study, analysis, and recommendations.

Part II: Relevance of sources used in the research

The qualitative method of research was used to analyze data; these included print documents, magazines, and electronic data. Subjective information and observation of Botswana, Zambia, and Zimbabwe case studies were used to describe the context, or natural setting, of the variables under consideration, as well as the interactions of the different variables in context. Data from the three case studies will be analyzed across the board, from minor to major issues causing poaching. The disadvantage of the qualitative method is that documents referred to may be incomplete and biased, lengthy, and difficult to access (Mahoney 1997).

Part III: How the data was analyzed

"Case study research excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. [Information is placed] into arrays, creating matrices of categories, creating flow charts or other displays, and tabulating frequency of events" (A. Maxwel 2005, 2). Researchers use the quantitative data that has been collected to validate and support the qualitative data that is most useful for understanding the rationale or theory underlying relationships (A. Maxwel 2005).

Analysis of the two case studies (Zambia and Zimbabwe) was used to either qualify or disqualify Botswana's anti-poaching campaign approach (es). Data measuring the variables identified in Chapter 2 from the above-mentioned two case studies was used to guide the qualitative data analyses. A wide range of variables leading to this analysis was reviewed in chapter 2. Tables 6 to 11 are used to analyze the effects of corruption,

socio-economic, governance, and law and order on wildlife conservation. These tables were also used to examine the total number of elephants poached in the last five (5) years in Botswana, Zambia, and Zimbabwe. These analyses are important for making informed conclusions and recommendations.

Selected Variables in Poaching

The following paragraphs introduce various variables as identified during literature review. The following themes and/or variables categorically stood out: corruption, socio-economic, governance, and law and order.

Corruption

Corruption means nonexistence of truthfulness or honesty in use of an official appointment for fraudulent achievements. An example of corruption is public corruption, which means exploiting public office for private gains, or misappropriation of one's power for the similar reason.

> Corruption has prevailed in all forms of government. Various forms of corruption include extortion, graft, bribery, cronyism, nepotism, embezzlement, and patronage. Corruption allows criminal activities such as money laundering, extortion, [poaching], and drug trafficking to thrive. Corruption in [numerous] forms prevails all over the world with bribery alone crossing one trillion US dollars annually. A state of unchecked political corruption is known as kleptocacy, which literally means “rule by thieves.” (The Gemini Geeks 2008, 1)

Corrupt organizations, systems, and departments, as well as nations and governments have always been associated with wildlife poaching. Corruption within African states is an issue that cannot be ignored and is a sign of the socio-economic position and political history of particular countries (Spencer and Slabbert 2010). Economic independence and social stability and cohesion play a key role in avoidance

and shunning of corruption. Corruption and democracy index matrices showing the countries under examination and other close neighbors of Botswana are used to quantify and qualify these assertions. This data was derived from Transparency International 2011.

Table 6 is used to analyze levels of corruption in the three countries under study (Botswana, Zambia, and Zimbabwe), with a view to determining the relationship between corruption and elephant poaching. This will lead to identification of gaps in the current regional wildlife conservation strategies.

Table 6. Corruption Index World Rankings – SADC countries

Rank	Country	Score (10 points)
	Botswana	
	Zambia	
	Zimbabwe	

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare," *The Guardian*, 1 December 2011, http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

Table 7 is used to analyze levels of governance in the three countries under study (Botswana, Zambia, and Zimbabwe), with a view to determining the relationship between governance and elephant poaching. This will lead to identification of gaps in the current regional wildlife conservation strategies.

Table 7. Governance Index World Rankings

Rank	Country	Score (10 points)
	Botswana	
	Zambia	
	Zimbabwe	

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare," *The Guardian*, 1 December 2011, http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

The literature review presented a number of other key variables affecting the curb of poaching in all the case studies. These are socio-economic challenges, status of democracy, the effectiveness of law and order, and comprehensive anti-poaching strategy. Each one of these variables was analyzed separately as shown below.

Table 8 is used to analyze the economy of the three (3) countries under study (Botswana, Zambia, and Zimbabwe), with a view to determining the relationship between national economy and elephant poaching. This will lead to identification of gaps in the current regional wildlife conservation strategies.

Table 8. Economic Index World Rankings

Rank	Country	Score (10 points)
	Botswana	
	Zambia	
	Zimbabwe	

Source: Created by author using data from The Heritage Foundation in partnership with *Wall Street Journal*, 2012.

Table 9 is used to analyze levels of law and order in the three (3) countries under study (Botswana, Zambia, and Zimbabwe), with a view to determining the relationship between law and order and elephant poaching. This will lead to identification of gaps in the current regional wildlife conservation strategies.

Table 9. Law and Order Index World Rankings

Rank	Country	Score (10 points)
	Botswana	
	Zambia	
	Zimbabwe	

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare," *The Guardian*, 1 December 2011, http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

Table 10 provides a consolidated matrix of the poaching variables; it provides a quick comparison of the countries under examination.

Table 10. Consolidated Matrix of Poaching Variables

	Corruption (Values 0 -10)	Socio-economic (Values 0 -10)	Governance (Values 0- 10)	Law and Order (Values 0 – 10)
Botswana				
Zambia				
Zimbabwe				

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare, *The Guardian*, 1 December. http://www.guardian.co.uk/news/datablog/2011/dec/01/ corruption-index-2011-transparency-international (accessed 29 May 2012).

Table 11. Poaching Variables Model

	Variables Pertaining to a Study of Elephant Poaching			
Country	**Corruption (Values 0-9)**	**Socio-economic (Values 0 – 9)**	**Democracy (Values 0 – 9)**	**Law and order (Values 0 – 9)**
Zimbabwe				
Zambia				
Botswana				

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare," *The Guardian*, 1 December 2011, http://www.guardian.co.uk/news/datablog/2011/dec/01/ corruption-index-2011-transparency-international (accessed 29 May 2012).

Transparency international 2011 provides rankings concerning the above-identified variables. The top twenty countries on the list shall score nine points each, the next twenty shall score eight points each, and the points shall reduce by one point per groups of twenty as the ranks spiral down. For example, Botswana is ranked number 34 on democracy index globally; this means it scores eight points. The purpose of this is to categorize countries with the top, second, third, fourth, and fifth categories as excellent, good, fair, poor, and ungraded.

Framework for data assessment

Tables 12-17 will provide insight on the impact the selected variables have on the phenomena of elephant poaching in the countries under observation. Developing themes and patterns were observed from the data and are analyzed in chapter 4 to identify the causes of poaching through a case study analytical framework. This analytical framework provided answers to both the primary and secondary research questions. After a thorough review of available background materials on poaching in Zambia, Zimbabwe, and Botswana, the following four variables were identified for each case study. These input variables are corruption, socio-economic, governance, and law and order.

Chapter 5 provides conclusions and recommendations as deduced from the analysis in chapter 4. The conclusions will answer the primary question “How can Botswana improve its anti-poaching strategy: A case study premised on elephant poaching in the Southern African region.”

Part IV: Summary and Conclusions

Chapter 3 presented the research methodology as well as a description of the qualitative methodology. It also provided an explanation of the application of case studies in qualitative research. It underscored the advantages and disadvantages of qualitative methodology and introduced methods of data collection. Chapter 3 presented variables that will be analyzed in chapter 4. Chapter 4 will provide analysis of these variables in the anti-poaching campaign case studies (Zambia and Zimbabwe) and compare them with those affecting Botswana. Logical conclusions and recommendations will be presented in chapter 5 resulting from the analysis in Chapter 4.

These recommendations will provide the basis for a more holistic examination of Botswana's anti-poaching strategy aimed toward a more effective means of preserving the nation's wildlife for future generations to come.

CHAPTER 4

ANALYSIS

Africa's wild animals are in an unfortunate situation, this is despite efforts put into conservation by organizations and activists, and their work is simply undermined by those who have opposing interests. This occurs, for instance, from habitat destruction, poaching, to either impelling or manipulating laws designed to protect species. "The current form of globalization has also been criticized for ignoring sustainable development and environmental concerns. For many years, critics, NGOs, activists and affected peoples have accused large corporations of being major sources of environmental problems. Consequently, helping species and ecosystems to survive becomes more challenging" (Shah 2011, 1).

Wildlife poaching, of elephants and rhinoceroses, pose a great challenge to the existence of these endangered species. Particular attention should be paid to poaching to preserve wildlife, more especially endangered species. The effects of extinct species due to poaching are very bad. Generations of humankind that follow the wiping out of these beautiful animals are denied forever the ability of seeing live wild animals roaming the wilderness. Moreover, poaching negatively affects tourism, which in turn affects national economic diversity. In order to achieve effective conservation of these animals the concerned countries should rethink their national conservation strategies (end state). These national strategies include among others effective employment of all instruments of national power; and where one of these instruments is most critical, all the required resources (means) should be provided to achieve the national objectives. This will in turn strengthen and equip those instruments of power to execute their duties.

Chapter 4 is organized according to the research questions presented in chapter three as shown below:

Section 1: What are the major causes and impacts of poaching?

The documents reviewed highlighted a number of causes and impacts of poaching. Major among them utilized in this research are corruption, social-economic ineffective governance, and law and order.

1. Corruption;

2. Ineffective governance;

3. Socio-economic; and

4. Law and Order.

Section 2: What are Botswana's ends, ways, and means needed for anti-poaching strategies to succeed.

Section 3: The role of regional cooperation on anti-poaching; and

Section 4: Summary and Conclusions.

Section 1: The major causes and impacts of poaching

Corruption

Transparency International's (TI) chair, Huguette Labelle, says corruption remains the most important global issue, shown by widespread demonstrations in 2011. The TI chair observed that 2011 was characterized with severe corruption as shown by protests in both privileged and underprivileged countries.

> Whether in a Europe hit by debt crisis or an Arab world starting a new political era, leaders must [heed] the demands for better government. Wealth seems no easy [remedy] to corruption; this is demonstrated by some relatively rich countries, including Russia, [that] fall [to] the bottom of the global league table. The TI chair further observed that some of the world's poorer states do

> comparatively well: Botswana, Bhutan, Cape Verde, and Rwanda all appear among the 50 "cleanest" countries. (Rogers and Provost 2011, 1)

Corruption therefore, is complex and very difficult to assess, what is generally perceived as corruption in one nation, is deemed otherwise in the other. What is generally perceived as unethical in one nation is perceived ethical in the other. For example, the provision of tips in the form of money in some countries is perceived as a good behavior, but other nations perceive this as unethical and tantamount to bribery or root cause of bribery.

Table 12. Corruption Index World Rankings–Showing countries under examination

Rank	Country	Score (10 points)
32	Botswana	6.1
91	Zambia	3.2
154	Zimbabwe	2.2

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare," *The Guardian*, 1 December 2011, http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

NB: The CPI scores countries on a scale of zero to 10, with zero indicating high levels of corruption and 10, low levels.

Botswana

Table 12 shows that Botswana is doing fairly well in addressing corruption as shown by a relatively higher score of 6.1 out of 10 as compared to the other two

countries. Daron, Johnson, and Robinson confirm these revelations by stating that Botswana's overall success can be attributed to virtuous policy, underlying institutions, and good leadership. They further put a tremendous amount of emphasis on the adoption of good policy in addition to the maintenance of good institutions. These institutions, such as the *Kgotla* system, gave Botswana the opportunity to grow incredibly, because community leaders ensured that law and order was observed at all times, while political leaders focused on development of the country (Daron, Johnson, and Robinson 2001). *Kgotla* system is whereby the leaders consult the general populace whenever there is need for any societal change. It highly considers and values public opinion, and the fact that disagreement on any matter should not lead to enmity.

Although Botswana seems to be doing fine in connection with corruption, it does not mean that corruption is eliminated. According to the laws of Botswana, any person convicted of an offence involving the unlawful possession of or trading in ivory, shall be liable to a fine of Pula (P)50,000.00 (approximately USD 6,700.00) and imprisonment of 10 years. This is not firm enough to deter poachers, considering the price of elephant tusk that currently stands at more than USD 700.00 (approximately P 5,250.00) per kilogram. An average elephant tusk weighs approximately 50 kg, which means it fetches roughly USD 35,000.00 (P 262,500). The penalty is also fixed; therefore, it does not take into consideration the number of tusks one possesses. This means that one elephant tusk is sufficient to keep the offenders away from the hands of the law in many ways. The offender can use the amount he/she made through the sale of one tusk to bribe and defeat the arms of justice (police, wildlife rangers, and whistle-blowers) and still get away with a lot of money.

Investigations of criminals, particularly those dealing with wildlife poaching need to be expeditious and thorough. Delays in dispensation of justice are bound to result in corrupt practices. There is room for improvement as shown by the President of Botswana's current persuasion of doing away with the red tape in government institutions (BOPA 2012). Some public services are delayed deliberately in order to cause the general populace to "pay" for them, when they are supposed to be provided freely. It is in view of the above that laws and policies governing wildlife conservation need to be tightened; otherwise, poachers can bribe everyone and still get away with huge sums of money. Notwithstanding this, Botswana is doing fairly well, and what remains to be investigated are the underlying causes of minor corruption as shown by the 3.9 deficit on the global scales.

Zambia

According to Table 12, Zambia is not doing well as indicated by score below 50 percent (3.2) on the Global Corruption Index. As shown in Chapter two Zambia had a paradigm shift from one-party state to multi-party state, experienced a copper price crash, and job cuts. These challenges led many Zambians including chiefs, business owners, police, military personnel, wildlife conservation staff, and politicians to engage in illicit ivory trade (Gibson 1999).

The police are meant to reinforce government laws and render civil rest. Their involvement in poaching is a clear indication of the fact that civil societies, government services, and general rule of law were overpowered by corruption since there was nobody to arrest the situation. Table 12 shows that corruption in Zambia is relatively bad, out of a total of 175, it is placed in the middle of the table (91). The recent conviction of Zambian

former Minister of Labor for illegallaly siphoning 2.1 billion Zambian Kwacha (approximately USD200,000.00) qualifies the challenges of corruption in Zambia (Africa 2012). According to Gibson, involvement of senior government officials in corruption dates back to the years when Zambia was one-party state. These included among others the secretary general of UNIP, district governors, parliamentarians, ministers of state, and other party officials (Gibson 1995).

The involvement of senior government officials in corruption translates into complexities in its containment by state law enforcement agents. Corruption is contagious and once the senior government officials get involved, the general populace get easily attracted into it. They generally perceive it to be a "legal" way of survival, especially where inflation rate and unemployment are high.

Zimbabwe

According to table 12, Zimbabwe is doing poorly on the global corruption index compared to the other two. Zimbabwe is an interesting case because after its independence in 1980 it started experiencing numerous challenges. The Index, which is strictly observed by investors, economists, and civil society campaigners, is premised on adept valuations and statistics of 17 investigations from 13 autonomous establishments, covering topics such as access to information, bribery of public officials, kickbacks in public procurement, and the enforcement of anti-corruption laws. "While critics note that [computing] perceptions of corruption is not the same as measuring corruption itself, the latter is almost impossible to do [because] corrupt [practices] are usually [covered] up, and hard data on graft and bribery is [usually extremely] difficult to access" (Duffy 1999, 101).

The Transparency International assessment confirms the themes that developed in the literature review. The declining Zimbabwean economy resulted in corruption reaching epidemic proportions. There is a high tolerance for it in society as it is seen as the only way to get timely service or any service at all especially in the public sector which is infested with petty corruption (Duffy 1999). High corruption rates in a country rich with wild animals lead to numerous cases of poaching dissipating into thin air without criminals' convictions. Complacency in the law enforcement resulted in more and more people getting into this lucrative ivory trade, to include ordinary people, military, politicians, and business owners as shown in chapter 2.

Table 13. Governance Index World Rankings

Rank	Country	Score (10 points)
33	Botswana	7.63
71	Zambia	6.19
147	Zimbabwe	2.68

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare," *The Guardian*, 1 December 2011, http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

Ineffective Governance

Botswana

Since independence, Botswana has experienced a steady growth in all aspects of society, especially political, economic, and social. From 1965 to 1995, Botswana was the fastest growing economy in the world. As shown in literature review, this was a result of equitable distribution of natural resource revenues, as well as good governance. George Ayitty's assertion that Botswana is a free country that affords it people freedom of expression is good demonstration of good governance. People can only express their opinions in a free environment (Ayittey 1992).

However, considering the fact that good governance is heavily dependent upon leaders at various levels, a lot remains to train and equip them with the basic skills. Leadership training will further improve and equip leaders for the ever-changing operational environment and poaching challenges. Many researchers have proven that Botswana is a shining example of good governance not only in Africa, but globally. This should not ultimately yield in complacency, which might lead to ineffective leadership and accountability at all levels.

Zambia

Unstable governance as demonstrated by the ousting of former Zambian President Kenneth Kaunda' administration in the mid-1980s, presented a good example of the effects of unstable governments on anti-poaching campaigns. Political institutions and economic decline fueled a wide spread of illegal wildlife market (Gibson 1999). Literature review showed that Zambian turmoil in the late 1980s was the root cause of elephant poaching in Zimbabwe.

Analytically, it can be deduced from Gibson's submission that unstable governance leads to poor leaders, and poor leaders result in poor service delivery, which in turn affects the social well-being of the people. Ultimately, corrupt practices such as bribery, kickbacks, and ineffective law enforcement force people to fight for survival through other means such as poaching.

Zimbabwe

According to Table 14, Zimbabwe is ranked 147th on global governance index, and as shown in chapter 2, the current trend of poaching in Zimbabwe is alarming. The implication of the law enforcement agents in poaching is a cause for concern. It became evident that most poaching that takes place in Botswana is from outside and the culprits are mostly associated with neighboring countries, especially Zimbabwe (Molomo et al. n.d).

On average, nations that underwent a civil war in Africa during the post-ban era realized a 31 percent decline in their elephant inhabitants contrary to a 62 percent surge in nonviolent states (Gibson 1995). This data validates the proposition that civil wars or unstable governments have adverse consequence on elephant preservation. Many elephants had to be killed in order to sustain these wars, for the acquisition of weapons and other demands for combat service support.

Socio-Economic

Table 14. Economic Index World Rankings

Rank	Country	Score (10 points)
33	Botswana	6.96
96	Zambia	5.83
178	Zimbabwe	2.63

Source: Created by author using data from The Heritage Foundation in partnership with *Wall Street Journal* © 2012

Botswana

According to Table 14, Botswana is ranked position 33 in the Global Economic Index Rankings. It scored 6.96 out of a total of 10 points; this is indicative of good economic growth from being the poorest at independence to middle-income economy within 40 years of independence. There are numerous reasons for Botswana's success story, key amongst them are the spirit of consultation and involvement of the nation in decision-making process (Economist 2009).

The adoption of good policies is a fundamental factor that ultimately contributed to development and growth in Botswana. The administrations in Botswana have had steady and reliable economic policies. In general, it can be concluded that good policies lead to investment, increased jobs, and better economic fundamentals. However, these beneficial policies would not have been nearly as effective without the underlying institutions that encourage economic growth, development, and investment (Lewin 2011).

Revenues from Botswana's natural resources (minerals, tourism, and agriculture), are all used holistically through national budget for development and recurrent projects such as construction of roads, schools, and medical facilities, just to mention a few. Unlike other African countries and of course many other countries of the world, Botswana considers minerals to be a property of the nation as opposed to tribes or ethnic groups. It is in view of this that many global economists remain puzzled by Botswana's quick transition from the third world at independence to a middle-class economy today. Nonetheless, there is a lot that Botswana can do to improve its economy. Amongst these avenues is a comprehensive strategy regarding wildlife conservation, since ecotourism is one of Botswana's great contributors to the GDP (4.5 percent), which is seen as a means to diversify the economy. Improvement of economy, particularly from wildlife revenues, will greatly assist in making Batswana effective custodians of wildlife.

Zambia

Zambia shows some improvement on global economic index as demonstrated by a score of 5.83. This has been greatly attributed to the current relatively peaceful elections and the political will of subsequent administrations after former President Kaunda's regime. These brought a lot of new developments and opportunities to Zambians, especially in agriculture, tourism, construction, manufacturing and the resurrected mining sector. The Zambian administration is pursuing forceful commercial improvements to inspire augmented private venture (Gibson 1995).

Nonetheless, a lot remains to be done to develop a comprehensive strategy that can tap into ecotourism. This strategy should incorporate the regional organization's (SADC) vision of wildlife conservation. As shown in literature review, economic

meltdown led to poaching of elephants and other wildlife for socio-economic needs in Zambia, therefore, improvement and sustenance of Zambian economy will positively affect poaching. Zambians engaged in poaching within and outside Zambia in order to acquire economic and social status at the expense of wildlife conservation as shown by their engagements in elephant poaching in Zimbabwe in the 1980s (Gibson 1995).

Zimbabwe

The economic crisis in Zimbabwe remains a serious challenge, not only for the Zimbabwe government and its people, but also to its neighbors and SADC as a whole. Clear means and ways should be developed to relieve Zimbabwe of its current economic meltdown, lest the wildlife conservation efforts will remain a challenge in the region as more and more people in Zimbabwe resort to poaching, especially elephants for their meat and valuable tusks. As it has been revealed in the literature review, there is a very thin line between corruption, socio-economic ills, rule of law, and effective governance. All these are critical requirements toward effective policies and programs at all levels (strategic, operational, and tactical).

Law and Order

During the literature review, laws governing wildlife conservation in the region were identified. Table 15 shows that Botswana is in the range of 6.1 in respect of law and order. This demonstrates that the wildlife and other natural resources, the people and their properties are safer if law and order continue to be reinforced effectively. The effects of law and order on anti-poaching campaigns can never be overemphasized as seen in the Zambia and Zimbabwe cases. Once the culprits are not apprehended and brought before

justice on time, the wild animals will remain vulnerable and could eventually become extinct.

Botswana

Table 15 shows that Botswana is currently doing well concerning law and order. This is also indicative of the low poaching incidents in Botswana. Henk rightly identified Botswana's resolve in the fight against poaching through its use of the military. However, the continued cases of poaching in Botswana calls for a review of the current policies and programs on wildlife conservation. The penalties are currently fixed and do not take into considerations the number of elephants or ivory the culprit has in his/her possession. The local police and all other key players do not have clear measures of effectiveness (MOE), and measures of performance (MOP) regarding the anti-poaching campaign.

Measures of effectiveness will assist these players to assess changes in wildlife conservation status. It will help to measure whether there is increase or decrease in poaching activities. This will in turn assist the participants in wildlife management to either confirm or deny whether they are doing the right things. MOE will assist in identifying gaps that need to be filled in order to achieve the end state, e.g. Botswana is focused in addressing poaching within its borders, is it the right thing to be done to address poaching? Measures of performance could assist all the key players to assess their actions. MOPs will ensure that appropriate actions are taken and completed to desired standards. It will assist the players to check whether they are doing things right (Army 2010).

Zambia

According to Table 15, Zambia is doing poorly concerning law and order. As mentioned earlier on, the interconnectedness between these variables have a cross cutting effect on poaching. Once the governance collapses or becomes ineffective, then the general populace begins to experience socio-economic challenges, which then leads to corruption, and ineffective rule of law. Zambia's copper price crash in the late 1970s led many Zambians into poaching, which later developed into a lifestyle or a means to survival.

Zimbabwe

Table 15 scores Zimbabwe very poorly, this means that the rule of law is adversely affected and criminals are barely apprehended. Duffy observed that the collapse of rule of law in Zimbabwe particularly on wildlife conservation was mainly attributable to budget declines. Zimbabwe has suffered dramatic annual budget declines from 1988; this was partly due to the government's response to expenditure reductions and budget deficit as part of the Economic Structural Adjustment Program (ESAP) (Duffy 1999). These budget cuts negatively affected the entire department (law and order) rendering it irrelevant and defunct, since the police and the military, as well as politicians and business people engaged in poaching.

Table 15. Law and Order Index World Rankings

Rank	Country	Score (10 points)
32	Botswana	6.1
91	Zambia	3.2
154	Zimbabwe	2.2

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare," *The Guardian*, 1 December 2011, http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

Table 16 provides a consolidated matrix of the poaching variables; it provides a quick comparison of the countries under examination.

Table 16. Consolidated Matrix of Poaching Variables

	Corruption (Values 0 -10)	Socio-economic (Values 0 -10)	Governance (Values 0- 10)	Law and Order (Values 0 – 10)
Botswana	6.1	6.96	7.63	6.1
Zambia	3.2	5.83	6.19	3.2
Zimbabwe	2.2	2.63	2.68	2.2

Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare. *The Guardian*, 1 December. http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

"The effectiveness of the CITES ban would best be determined by comparing levels of poaching pre and post ban, measured by the number of carcasses found without tusks. Unfortunately, such data are not available for [most] African [countries]" (Stiles 2004, 1).

"It is widely accepted that ivory driven poaching in the 1970s and 1980s led to a [considerable] decline in elephant populations. More than 1.3 million elephants [moved around] Africa in 1979; [and] in 1989, there were approximately 600,000" (Aarde and Jackson 2007, 290). Almost half of the elephant populations were lost mostly to poachers within a period of 10 years. In Kenya, raw ivory was worth $2.50 a pound in 1969, $34 a pound in 1978, and more than $90 a pound in 1989 (Messer 2000). The price of elephant tusk rose sharply; from 1978 to 1989 it rose by a factor of three. This is an indication of high demand for the ivory supply, the higher the demand, the higher the price. Because "bigger tusks meant bigger profits, [the bulls (males)] with tusks weighing six or seven times those of females were the usual targets of poaching. This [resulted] in skewed sex ratios in some herds, calling into question their [enduring] survival. More elephants were [therefore] killed to meet the weight demands of the international ivory market as the number of bulls declined" (Messer 2000, 52).

"The raw ivory obtained by poachers is sold to wholesalers and artisans and is often shipped overseas before being carved into a variety of items such as chopsticks, figurines, piano keys and chess sets. Milliken and others observed that tourists visiting Africa are also responsible for the continued demand for ivory" (Milliken et al. 2006, 4). This is mainly because not all tourists have the welfare and conservation of wildlife in their plans.

Section 2: What are Botswana's ends, ways, and means needed for an anti-poaching strategies to succeed

Ends

Botswana's resolve in its endeavor to address poaching is clearly marked by the current deployment of its military in anti-poaching. The end state is to provide a safe and secure wildlife environment and promote tourism industry. The other key objective is to preserve the endangered species through controlled hunting programs and policies as indicated in Botswana National Conservation Strategy (NCS). As indicated in Table 1, currently Botswana does not have a dedicated policy and/or strategy that integrate the BDF in anti-poaching campaigns.

Ways

In 1990, Botswana adopted a NCS to mediate, integrate and refocus the natural resource challenges, including poaching and unsustainable use, to assess environmental issues in view of future human needs. Because the NCS is a national strategy that encompasses both development and conservation objectives, there is bound to be some discrepancy. The overarching nature of the strategy will consistently encounter either real or perceived ambiguities despite the fact that "sustainable development" intends to integrate competing objectives into a complementary strategy package. Nevertheless, the Botswana NCS does exhibit relatively high clarity and consistency of objectives within itself. Nevertheless, it does not provide clear guidance or mechanisms for resolving competing demands on resources (Honadle 1994). It does not also synchronize and harmonize the efforts of the instruments of national power.

However, there are general policies that address wildlife management in Botswana. Initially Botswana used the Department of Wildlife as a means to preservation and protection. In the late 1980s, poaching cases surged, and the government realized that this surge was mainly due to the type of poachers the country was dealing with. Unlike past poachers who used hunting rifles, today's poachers use weapons of war, such as AK 47s, improved radio connections, and a much more lucrative market (Murphree 2003).

The BDF was then involved because of a quasi-political decision as opposed to a coherent strategy resulting from a deliberate decision making process. This involvement of the BDF in anti-poaching in the late 1980s evolved and eventually became a means to a "national strategy" in the protection of wildlife. However, it is worth noting that despite these strategic efforts of deploying the BDF in anti-poaching campaigns in 1987, poaching incidents continued in the BDF's operations area.

Table 1 shows general policies and programs initiated to curb poaching and provide sustainable use of natural resources, especially wildlife. However, these policies' approaches are too general to address this problem, which now is imminent and complex since it involves "outsiders" (Dzingirai 2003).

Means

Financial support for Botswana's wildlife conservation programs comes from the national budget through the Ministry of Wildlife and Tourism (MWT). Annual financial estimates sponsor both recurrent and development projects of MWT to improve policies and programs with a view to attain wildlife conservation objectives. Donor agencies also play some role in funding of wildlife conservation programs. For example, United States Agency for International Development (USAID) has been involved in initiating and

helping Botswana execute many of community based natural resource conservation projects and has substantial experience with community-based natural resource management in other countries as well.

Section 3: The role of regional cooperation on anti-poaching and its impact on Botswana's anti-poaching campaign

> The rise in elephant and rhinoceros poaching in Zambia has more to do with the changing aspects of the global economy than any single factor within the country. The plummet of global copper prices in the mid-1970s, copper being Zambia's chief foreign exchange earner, forced many Zambians to discover new sources of revenue. Many Zambians began to hunt and kill rhinoceroses, especially black rhinoceroses and elephants, for their horns and tusks respectively, which traded on the domestic and international markets. In the 1970s, Zambia had an elephant population of approximately 35,000, yet by the early 1990s, only about 6,000 elephants remained. (Kelso 1993, 69)

Wild animals have always enjoyed the freedom of movement within the region, and as such, conclusions are that some of these black rhinoceroses belonged to other countries within the SADC region. Moreover, as hunting continues, they tend to move away from the notorious hunters into more "safer" places. In pursuit of these animals, the poachers risk their lives, and violate the international immigration and movement laws and trespass into other countries to commit crimes against hunting (Spencer and Slabbert 2010). Elephant movements across borders, call for joint operations and cooperation between the concerned countries.

The current joint patrol exercises between the BDF and the Namibian Defence Forces (NDF), in the general area of the North West Botswana are an indication of the two nations' resolve against poaching and associated crimes. A platoon comprising of 111 Medium Artillery Regiment from BDF and 126 Motorized Infantry Battalion from the NDF recently monitored and patrolled a total distance of 800 km both on foot and on

vehicles. These patrols are a result of the resolutions of the Joint Permanent Commission (JPC) between these two countries. One of the main reasons for these patrols, according to the JPC resolutions, is to deter and curb cross border crimes, illegal immigration, poaching, livestock rustling, and to provide aid to civil authorities in the general area (Wasebura 2012). A platoon covering 800 km is excessively small to realize the desired end state of curbing crime and poaching, which are always on the rise. This challenge requires a review on current deployments that will see more forces, wildlife rangers, and the general populace from either side of the borders working jointly towards achieving the goal.

Although Botswana has resorted to using its military in curbing poaching, a dedicated paramilitary and/or military wing may be developed exclusively for anti-poaching. Botswana's intervention efforts against poaching need to be deliberate and focused in order to undermine and outsmart any efforts by the ever-determined poachers. As the literature review showed, fixed penalties are not effective and therefore in order to effectively address poaching from the legal perspective, the current penalties needs a revision with a view to heavily criminalizing poaching.

Section 4: Summary and Conclusions

Table 17. Poaching Variables Model

Variables Pertaining to a Study of Elephant Poaching				
Country	**Corruption (Values 0-9)**	**Socio-economic (Values 0 – 9)**	**Governance (Values 0 – 9)**	**Law and order (Values 0 – 9)**
Zimbabwe	2	1	2	2
Zambia	5	5	5	5
Botswana	8	8	8	8

Source: Created by author using data from Simon Rogers and Claire Provost, "Corruption Index 2011 from Transparency International: Find out how countries compare," *The Guardian*, 1 December 2011, http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

As explained in chapter 3, there are currently 175 countries under survey by Transparency International. Categorization of these countries into groups of twenty was done to see how each of the countries used in this research stand globally regarding the identified variables. The top twenty countries score nine (9) points, and the lowest scores zero.

Although the SADC region is relatively stable, Zimbabwe has some political, social and economic challenges. The instability in Zimbabwe has some bearing towards poaching in the northeastern parts of Botswana. The review of literature showed that the pre-inflation era in Zimbabwe saw poachers encroaching and engaging in illegal hunting

in Zimbabwe from Zambia. Financial gains from poaching force these poachers to jump the border and poach.

Observations are that even though the region enjoys cooperation, the fall of Zimbabwean stability has greatly stifled regional social and security cooperation. Opportunistic groups and individuals usually seize initiatives in unstable regions to harbor and embark on their illegal activities. These areas automatically turn into safe havens and springboards from which they launch their attacks to achieve their goals. Reports are that poaching has greatly increased in Zimbabwe, which happens to be the habitat of the black rhinoceros (Duffy 1999).

Botswana is partly meeting its anti-poaching campaigns objectives (ends), however, synchronization and harmonization of wildlife (elephant) conservation policies and programs (ways) is still required. The current policies are general and operate exclusively at the expense of other key players. There is critical requirement for a more sustaining budget (means) from the national budget and other stakeholders to facilitate a more conducive environment for all the key players.

It is evident that regional cooperation, especially with Botswana's close neighbors is mandatory for effective elephant conservation due to their migratory habits and nature of poachers. Disjointed conservation efforts have proven futile, especially when dealing with elephants whose habitat spans several distances across borders. A comprehensive strategy that incorporates, harmonizes, and synchronizes the national and regional ends, ways, and means will assist in identifying the capability gaps as well as the provision of unity of effort, both nationally and regionally.

CHAPTER 5

CONCLUSION

The primary purpose of this research has been to identify and recommend anti-poaching programs that are more effective in the Southern African region through the analysis of key variables that impact upon the poaching of elephants in Botswana. The chapter 4 analysis identified that the four major causes of poaching are corruption, ineffective governance, socio-economic challenges, and law and order. It also analyzed Botswana's ends, ways, and means in anti-poaching campaigns. Chapter 4 emphasized regional cooperation as the surer way to address poaching challenges facing the region.

Chapter 5 is organized as follows:

1. Recommendation for action to the Southern African region;

2. Recommendations for further studies; and

3. Summary and Conclusions.

Recommendation for action to the Southern African region

The analysis of this research focused on causes and impacts of poaching in Botswana, Zambia, and Zimbabwe. It emerged that the primary cause of poaching is corruption. According to the Transparency International corruption index, Zambia and Zimbabwe polled relatively low, and the analysis showed several cases of corrupt senior government officials in addition to other custodians of wildlife. As shown during the analysis, corruption causes are usually subtle, and in most cases, its victims are a result of either abuse of office or greed due to loopholes within the system. It requires moral

courage to overcome corruption; therefore, the region should engage in anti-corruption campaigns. Education at all levels should aim at uprooting corruption amongst societies. These should include schools, national forums, and regional forums. The region should also establish and coordinate intelligence networks and ensure intelligence-based law enforcement in strategic locations, these should include all of Botswana's neighboring countries, for example Namibia, South Africa, Zambia, and Zimbabwe.

During analysis, it became evident that ineffective governance is a major cause of poaching within the region. Over the years, failing or failed states have suffered loss of their natural resources (Gibson 1995). Ineffective governance has a crosscutting effect. Whenever governance becomes ineffective, all other social ills (corruption, poverty, and lawlessness) are exacerbated. The governments support most of the policies and programs, and if governments are ineffective, programs and policies become ineffective too. Regional governments, in concert with their people, should establish firm constitutions, and have a strong will to uphold them. Governments need to promote and enhance national and regional peace efforts aimed at greater stability. Stability will greatly assist in elephant conservation since time and resources will be dedicated to conservation efforts. All efforts should be pursued both at national and regional level to support wildlife conservation policies (socially, politically, and economically).

Chapter 4 revealed that socio-economic challenges cause people to engage in poaching. Community Based Natural Resources Management groups, or trusts governing policies, should empower the local communities with a view to promoting wildlife ownership by the local communities. Funds collected from tourism and related activities should improve their life styles and elephant conservation policies and programs. Active

involvement of local communities will help to provide the required intelligence that in turn will help to fight corruption and protect the elephants. Once the communities are involved, the protection of elephants will require less effort from the rangers.

Law and order contributes heavily in anti-poaching programs, as shown by the involvement of men and women in uniform. Manipulation of the legal system by those who are supposed to be maintaining the checks and balances can be very complex. Therefore, a review of current policies and legislation with a view to identifying loopholes and critical vulnerabilities is paramount to elephant conservation. Establishment of national and regional elephant criminal databases will identify poaching trends and patterns. This will help to provide intelligence about poachers and repeaters regardless of where the offence is committed within the region. Build capacity, increase numbers, train and equip rangers (wildlife personnel) to increase boots on the ground and instill a sense of duty and discipline. Analysis of the above-mentioned key variables led to the analysis of Botswana's ends, ways, and means in wildlife conservation.

The Botswana wildlife conservation strategy's ends, ways, and means do not involve all the key players, both nationally and regionally. A close study of the current ends, ways, and means has led to a recommendation of a framework for Botswana's wildlife conservation strategy as outlined below.

Table 18. Recommended strategy for wildlife conservation

Ends	**Ways**	**Means**
1. Safe and secure elephant populations (Zero poaching incidents) 2. Safe tourism (stable tourism industry) 3. Active involvement of all the key players This should include national and regional key players such as law enforcement officials, general populace, and combined joint military campaigns through security cooperation and other forums.	1. Policy on elephant conservation in Botswana 2. Policy on elephant poaching in the SADC region 3. Effective laws governing wildlife to be firm and commensurate with the severity of the offense 4. Collaborating with Botswana's general populace, IGOs, NGOs, and regional governments	1. National budget (increased national budget towards wildlife conservation) 2. Funding from IGOs, NGOs (regional governments should seek more financial aid from NGOs/IGOs in order to fund conservation policies) 3. Funds from private sector

Source: Created by the author.

Chapter 4 also analyzed regional cooperation between SADC countries with particular reference to Botswana, Zambia, and Zimbabwe. The analysis revealed that the current anti-poaching campaigns are disjointed, despite the fact that the elephants belong to the region (migratory). In order to address poaching, it remains clear that unity of effort between the concerned countries remains a priority. Regional cooperation through trans-boundary customs to foster regional cooperation and liaison, focusing on the Botswana/Zimbabwe, Botswana/Zambia, Botswana/ Namibia, and Botswana/South African borders will enhance effective measures of curbing movements of elephant products and by-products.

Recommendations for further study

Although poaching is a global, continental, and regional challenge, this research primarily focused on poaching in Botswana. Research can be conducted either at global or regional levels to establish the extent of economic impact of poaching on the tourism industry. A further study could be conducted to find out how the regional governments can intervene and save endangered species before extinction. Research has shown that denial of poaching has resulted in the black rhinoceroses being extinct in West Africa (Gibson). Poachers kill animals indiscriminately, this means that young ones are orphaned and chances of survival is reduced due to its susceptibility to predators and other factors. A study to find out how poaching impact the lives of orphaned young wildlife animals and how the region can collaborate forces in preserving pregnant and nursing endangered species is also recommended.

Barring of elephants from crossing borders on their pursuit of pastures and water is relatively complex and costly. A further study could be carried out to establish how these movements encourage poaching. Relationships between the poachers and the local populace, the local populace and the Soldiers, and the Soldiers and poachers have not been exploited in this research. Research could be established to find out how these relationships affect the overall objectives.

Summary and Conclusions

The primary purpose of deploying the BDF in wildlife conservation was to save the wildlife and tourism industry, which poachers threatened. Although this was a noble act, a more comprehensive strategy is needed that takes into consideration all the four instruments of national power (diplomacy, informational operations, military, and

economy) and the inclusion of other regional players. This strategy should be premised on defeating the four major causes of poaching as identified and recommended above.

This strategy should encompass the whole government, including the general populace and other regional governments. The BDF has made relative success compared to the other militaries cited in the case studies. However, since the challenges evolve with time, new strategies need to be developed in order to address them. Ultimately, consideration of the recommendations noted above in the development of a comprehensive strategy will assist to alleviate the current challenges inherent with anti-poaching campaigns.

In conclusion, the following key variables stood out during analysis as major causes of poaching: corruption, ineffective governance, socio-economic challenges, and ineffective law and order. Botswana should incorporate all other key players both nationally and regionally to eradicate these major factors causing poaching in order to effectively preserve its wildlife.

REFERENCE LIST

Aarde, R. J., and T. P. Jackson. 2007. Megaparks for metapopulation: Addressing the causes of locally high elephant numbers in Southern Africa. *Biological Conservation*: 289-297.

AfricaHunting.com. n.d. South Africa may dehorn Rhinoceroses and ban hunts to stop poaching. http://www.africahunting.com/latest-hunting-news/6197-south-africa-may-dehorn-rhinoceross-ban-hunts-stop-poaching.html (accessed 16 January 2012).

Command and General Staff College (CGSC). 2001. C200, *Strategic environment. strategy*. Leavenworth, KS: Government Printing Office.

BBC News. 2011. Kenya burns ivory in fight against poachers. Last updated 20 July. http://www.bbc.co.uk/news/world-africa-14217147 (accessed 7 October 2011).

BOPA. 1991. Natural resource aspects of sustainable development in. *Biodiversity*.

———. 2012. Eliminate red tape - Khama. *Botswana Daily Newspaper*.

Botswana Defence Force Magazine. 2010. In and around. Joint Exercise (7 May).

Botswana, G. 1992. *Wildlife Conservation and National Parks Act 1992.* Gaborone: Botswana Press Agency (BOPA).

———.n.d. Guides and hunters licence. PCNet: http://www.mewt.gov.bw/DWNP/article.php?id_mnu=164 (accessed 2 May 2012).

Botswana Kalahari Conservation Society. n.d. Milestone achievements since 1982. http://www.kcs.org.bw/Page.aspx?PID=42 (accessed 29 February 2012).

Bridgland, F. 1994. The end of the rhinoceros. *Sunday Telegraph*.

Brown, Michael, and Barbara Wyckoff-Baird. 1992. *Designing integrated conservation and development projects.* Washington: Biodiversity Support Programme.

Chase, Mike. 2009. Why collar and track elephants. ElephantsWithoutBorders.org. http://www.elephantswithoutborders.org/living_with_elephants.php (accessed 30 April 2012).

Chebanna, A. M. 2007. The Vision 2016 and the voice(s): Prospects for indeginous languages in Botswana. *Indeginous Languages in Botswana*: 14-27.

Department of the Army. 2005. Field Manual (FM) 1, *The army*. Washington, DC: Government Printing Office.

Department of Health and Human Services. 2008. Male circumcision and risk for HIV transmission and other health conditions: Implications for the United States. http://www.cdc.gov/hiv/resources/factsheets/circumcision.htm (accessed 27 November 2011).

Duffy, R. 1999. The role and limitations of state coercion: Anti-poaching policies in Zimbabwe. *Journal of Contemporary African Studies*: 97-111.

Dzingirai, V. 2003. CAMPFIRE is not for Ndebele migrants: The impact of excluding outsiders from campfire in the Zambezi Valley, Zimbabwe. *Journal of African Studies*: 443-459.

Earth Observatory. 2009. Okavango delta information.Okavango-Delta.net. http://earthobservatory.nasa.gov/IOTD/view.php?id=38367 (accessed 22 October 2011).

Economist. 2009. Why is Botswana so successful. *Zambian Economist*: 1.

Elephant and rhinoceros poaching in Zambia, 150 (Zambia).

Gerstein, Dean R., and Lawrence W. Green, ed. 1993. *Preventing drug abuse: What do we know*? The National Academies Press. http://www.nap.edu/openbook. php?record_id=1883&page=76 (accessed 1 November 2011).

Gibson, C. 1995. Killing animals with guns and ballots: The political economy of Zambian. *Environmental History Review* 19, no. 1: 49-75.

Gibson, C. C. 1999. *Politicians and poachers: The political economy of wildlife policy in Africa*. Cambridge: Cambridge University Press.

Henk, Dan. 2004. Evolution of a professional African military. *African Security Review* 13, no. 4. http://www.iss.co.za/pubs/ASR/13No4/EHenk.htm (accessed 20 January 2012).

———. 2007. *The Botswana defence force and the war against poachers in Southern Africa.* Palgrave Macmillan. http://www.palgraveconnect.com/ pc/doifinder/10.1057/9780230610446 (accessed 20 January 2012).

Hunt, Richard. Human immunodeficiency virus and aids statistics. *Microbiology and Immunology On-line*.http://pathmicro.med.sc.edu/lecture/hiv5.htm (accessed 15 January 2012).

International Rhinoceros Foundation. 2009. Experts say Zimbabwe rhinoceros in “state of crises.” http://www.rhinoceross-irf.org/en/rel/20/ (accessed 9 April 2012).

IRAS, Information System for Rare Species Management. 2012. Elephant: Transboundary range. http://www.nnf.org.na/RARESPECIES/InfoSys/elephant/distribution/La_Distribution_Africa.htm (accessed 29 May 2012).

Jane's Intelligence and Insight. 2011. Defense budget (Botswana). *Sentinel Security Assessment-Southern Africa*, 28 July. http://articles.janes.com/articles/Janes-Sentinel-Security-Assessment-Southern-Africa/Defence-budget-Botswana.html (accessed 27 November 2011).

Joint Chiefs of Staff. 2010. Joint Publication 3-0, *Joint operations.* Incorporating Change 2. Washington, DC: Government Printing Office.

Jones, T. 1999. *Community based natural resource management in Botswana and Namibia: An inventory and preliminary analysis os progress*. Windhoek: IIED.

Kelso, B. J. 1993. Hunting for conservation. *Africa Report* 38, no. 4: 68-71.

Kgathi, D., and B. Ngwenya. 2002. Community based natural resources management and social sustainability in Ngamiland: Implication for natural resource management. *Community Based Natural Resource Management*, 1-23.

Khama Rhinoceros Sanctuary Botswana. What is the Khama rhinoceros sanctuary trust? http://www.khamarhinocerossanctuary.com/about.htm (accessed 22 October 2011).

Khama, S. K. 2008. *Inaguration speech report.* Gaborone: BOPA.

Kiiru, Winnie. 2003. Ivory smuggling. http://www.newscientist.com/article/mg 18024214.500-ivory-smuggling.html (accessed 22 October 2011).

Knight, Matthew. 2011. Western black rhinoceros declared extinct. *CNN*. http://edition.cnn.com/2011/11/10/world/africa/rhinoceros-extinct-species-report/index.html?hpt=wo_c2 (accessed 11 November 2011).

Kremer, M., and C. Morcom. 2000. Elephants. *American Economic Review*, 212-234.

Lewin, M. 2011. Botswana's success: Good governance, good policies, and good luck. *Botswana's Success*, 81-90.

Maxwel, Joseph A. 2005. *Designing a qualitative study.* Thousand Oaks CA: Sage.

Messer, K. 2000. The poacher's dilemma: The economics of poaching and enforcement. *Endangered Species Update*, 1-7.

Mguni, Mbongeni. 2011a. "Outdated" datum line comes under review. *Mmegi Online,* 1.

———. 2011b. Botswana: Poachers plunder wildlife...as 644 animals die in five years. http://www.africahunting.com/latest-hunting-news/5447-botswana-poachers-plunder-wildlife-644-animals-die-five-years.html (accessed 8 April 2012).

Mmegionline. 2011. South Africa's record for rhinoceros poaching deaths. *The Monitor* 12, no. 41 (7 November). http://www.mmegi.bw/index.php?sid=11 &aid=1211&dir=2011/November/Monday7 (accessed 7 November 2011).

Mosarwe, Q. 2012. President Khama warns poachers. *Botswana Gazette*.

Murphree, P. M. 2003. *Report from the communities and conservation in southern Africa.* Cape Town: University of the Western Cape.

Nixon, Douglas F., ed. 2008. Estimated HIV trends and program effects in Botswana. http://www.plosone.org/article/info:doi/10.1371/journal.pone.0003729 (accessed 29 March 2012).

Praetorius, Dean. 2011. Rhinoceros airlift photos: Black rhinoceros ceros transported to new home by air. *Huffington Post*, 6 November. http://www.huffington post.com/2011/11/06/rhinoceros-airlift-black-rhinocerosceros-photos_n_ 1076788.html (accessed 25 March 2012).

Prato, Tony, and Dan Fagra. 2005. *National parks and protected Areas.* Blackwell Publishers. http://www.nrmsc.usgs.gov/files/norock/products/NP&P-book_flyer.pdf (accessed 2 September 2011).

Radio Voice of People. 2011. 2000 Zimbabweans deported monthly. 20 October. http://www.radiovop.com/index.php/national-news/7324-2-000-zimbabweans-deported-monthly.html (accessed 22 October 2011).

Rogers, Simon, and Claire Provost. 2011. Corruption index 2011 from transparency international: Find out how countries compare. *The Guardian*, 1 December. http://www.guardian.co.uk/news/datablog/2011/dec/01/corruption-index-2011-transparency-international (accessed 29 May 2012).

Ruggero, Ed, and Dennis F. Haley. 2005. *Leaders compass*. *A personal leadership philosophy is your key to success*. Academy Leadership Publishing.

Wasser, Samuel K., and William J. Clark. 2008. Combating the illegal trade in African elephant ivory with DNA Forensics. *Conservation Biology*.

Saving Rhinoceros. n.d. Rhinoceros horn is not medicine. http://www.rhinoceros conservation.org (accessed 4 December 2011).

Seaworld.org. n.d. Elephants, conservation and research. http://www.seaworld.org/ animal-info/info-books/elephants/conservation.htm (accessed 7 January 2012).

Shah, A. 2011. Nature and animal conservation. *Global Issues*, 1.

Spencer, C., and J. Slabbert. 2010. Using the popular press to quantify the impact of poaching activities on African elephants in Sub-Saharan Africa. *Transfrontier Africa-SAVANNA Project*: 3-22.

Stegner, W. 1960. Preservationists and the struggle to preserve wilderness in the West. *Wilderness Letter*.

Stiles, D. 2004. The ivory trade and elephant conservation. *Environmental Conservation*, 309-321.

Stiles, Daniel. 2004. Tough choice for elephant lovers. *New Scientist* 183, no. 2462 (8 August).

Sullivan, L. 2010. Missouri Update. *The Nature Conservancy*, 1-15.

The Botswana Gazette. Tourism earned P1 billion during the festive season. www.gazettebw.com (accessed 17 February 2012).

Trochim, W. M. 2006. Research methods knowledge base. *Cengage Learning*, 361.

Tzu, Sun. 1963. *The art of war*. Oxford: Oxford University Press.

Vollers, M. 1987. A war to save the black rhinoceros. *Time Magazine* (7 September): 56-57.

von Clausewitz, Carl. 1976. *On war*. Princeton, NJ: Princeton University Press.

Wasubera, Joseph. 2012. BDF in joint patrols with NDF. *BDF Newsletter In & Around* 26 (March), 5.

Yarger, H. R. 2008. Toward a theory of strategy: Art Lykke and the U.S.Army War College strategy model. *Theory of War and Strategy*, 43-51.

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